Design, Implementation and Evaluation of Coping Strategies Among New Zealand Female Field Hockey Players

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CHAPTER ONE

Introduction

"I've struggled with the ability to cope [in hockey] *most of my life. It took me a long time to be able to cope effectively, so it would have been great if I had been taught it or learnt it earlier. I'm playing the best hockey of my career now, but unfortunately I'm very close to retiring."* (Personal communication, Vanessa, 2002).

The above quote was made by one of New Zealand's highest profile female hockey players. In context, it illustrates the influence of coping on the careers of elite sportspeople. It is well documented (Gould, Guinan, Greenleaf, Medbery & Peterson, 1999; Crocker & Graham, 1995; Krohne & Hindel, 1988; Smith, 1986a) that coping with stress is a critical factor in achieving sporting success.

The above player expressed disappointment in her ability to cope throughout the earlier stages of her career. She now believes that if she had received assistance earlier in her career to help her cope effectively, it would have helped her "get more out of hockey" and "even realise her full potential" within the sport. Indeed, it is ironic and unjust that her experiences finally enable her to perform to an optimal level psychologically. However, because of her age, she is less able to cope with the physical demands and contemplating retiring from international hockey.

Other athletes have expressed the feeling that being taught coping skills, rather than having to learn them the hard way, they might have performed at even higher levels earlier in their careers. Similar stories of athletes being unable to reach optimal performance are not uncommon in sport. A prominent hockey coach of age-group level in New Zealand stated that she often finds *"some really talented players at age groups who have so much ability and can read the game beautifully but never make it the next level. Why? Because they can't cope with the pressure. We need to help these players improve their psychological skills, just like we do for their technical skills."* (Personal communication, Gillian, 2002).

Such examples are not surprising, given the relatively uncertain, dynamic and evaluative nature of competitive sport. Indeed, sport places elite athletes under high

levels of physical, psychological and emotional stress (Hardy, Jones & Gould, 1996). Hardy, Jones, and Gould also stated that participating in competitive sport demands that athletes not only have a high level of ability but also are able to render a repertoire of skills to cope with stressful situations within competitive environments.

Over the past 15 years sports psychology researchers have become increasingly interested in the phenomena of coping. This is hardly surprising, given the importance of coping to elite athletes' success. With the prominence of sport science in enhancing athletes' performances, and the recognition that mental and emotional processes play a crucial role in enhancing that performance, the use of psychological skills training programmes is becoming an integral part of the training of elite athletes. Athletes are looking for a competitive edge, to help them reach peak performance. At elite level, an athlete's ability to perform at key moments, when under considerable pressure, is paramount.

Despite considerable research on the concept of coping as integral to peak performance, (Hammermeister & Burton, 2001; Pensgaard & Duda, 2003; Poczwardowski & Conroy, 2002) few studies have been applied to help athletes cope more effectively. Some recent research (Dugdale, Eklund, & Gordon, 2002; Kim & Duda, 2003; Haney & Long, 1995; Nicholls, Holt & Polman, 2005; Ntoumanis & Biddle, 2000) has studied the effectiveness of coping responses within competitive sporting environments from a conceptual perspective. This has demonstrated the value of applying the findings from examination of the concepts of coping to make beneficial contributions, which enhance elite performance. It is hoped that further applied research, will provide more substantial/fruitful information to assist both hockey coaches and players.

The complexity of coping is well documented (Bouffard & Crocker, 1992; Gould, Eklund & Jackson, 1993; Lazarus & Folkman, 1984), especially within sporting situations. Coping is any conscious effort used to overcome a stressful situation or demand (Stone & Neale, 1984) where it focuses on the strategy used rather than whether it is successful or not. Research has indicated that a wide variety of coping skills are used by athletes (Hardy et al., 1996). Recent studies have proposed that a greater

understanding of coping could be gained through exploring how athletes actually deal with the situations they encounter.

Previous studies have revealed a lack of research examining stress and coping in the context of successful elite athletes (Crocker & Graham, 1995; Gould, Eklund & Jackson, 1993; Park, 2000; Scanlan, Ravizza & Stein, 1989). Thus there is a clear need for further research to examine coping in a variety of elite sports where the athletes are performing well, especially team sports (Noblet & Gifford, 2002). As stated by Giacobbi and Weinberg (2000), research needs to focus on certain sub-groups of athletes, such as college athletes, elite or professionals. Indeed, this study aims to further enhance the literature on coping in elite sports.

The swift moving, skilled-based style of hockey makes it an exciting, challenging and enjoyable sport. The complexity of the sport places great demands on players. Players have to execute a wide variety of technical skills with great speed and accuracy. Anticipation is integral to success and leaves no room for hesitation. The dynamic and uncertain nature of the sport requires players to deal regularly with stressful situations. By examining the coping techniques of elite hockey players, one can learn more about how team athletes cope with specific stressors.

It appears that women differ somewhat from men in how they cope. Women are more susceptible to anxiety and use more emotion in coping than do men (Endler & Parker, 1990; Maccoby & Jacklin, 1974; Ptacek, Smith & Dodge, 1994). Recent studies (Anshel, 1997; Anshel, Williams & Hodge, 1997) found that gender differences existed for responses to certain stressors, in the function of task- and emotion-focused coping and that female athletes preferred approach-emotion coping. Considering all factors, such as the scope of the study, that gender differences do exist and the higher profile womens hockey in New Zealand has compared with mens, only female athletes were examined in this study. Focusing on females for this study also coincides with the considerable growth in participation of women in sport over the last 30 years.

In New Zealand, 22, 056 females play hockey. Success at the 2000 Sydney Olympics for the New Zealand women’s team raised the profile of hockey within New Zealand. Previously, hockey had been a sport that was relatively neglected by the

public/media, lacked financial support, and received fairly little attention or major assistance. To date, no research on coping in hockey has been done in New Zealand.

The earlier quotes used in this introduction show a need for coping research within New Zealand elite female hockey. Specifically, there is a need for applied research, where the investigation not only explores the concepts within coping in competitive hockey but actually assists players to cope more effectively. Indeed, it is envisaged that this investigation will provide a first step in assisting New Zealand female hockey players with coping.

Purpose of the Study

The primary purpose of this investigation was to explore the issues central to both coping in competitive hockey and the coping needs of elite female hockey players in New Zealand. The second purpose was to provide valid practical recommendations and a Coping Mental Skills Training Programme (Coping MSTP) package for field hockey players and coaches. The present investigation was grounded in a triangulation approach to investigate the issues central to coping in hockey. In addition, the study looks at the conceptual relevance of the influence of situation and dispositional factors on coping with competitive stress.

Research Questions

The study was divided into three parts. Specifically, this study will explore and examine the following issues, which have been identified by previous literature as important in coping in competitive sport:

A. Design

1. Identify:

- What stressful situations and/or challenges are experienced by athletes during major hockey competitions.
- How players react to stressful situations and challenges.
- The types or combinations of coping strategies used by athletes.

2. Explore: Individual differences in the stability and variability of coping.
   - Investigate the differences in coping strategies used across various stressful situations.
   - Investigate performance of players who cope effectively in comparison with those who are ineffective at coping.

3. Examine: The relationship between coping strategy effectiveness, automaticity and performance.

B. Implementation

1. A coping Mental Skills Training Programme (Coping MSTP) was implemented. This intervention will be grounded in the findings from the first part of the study.

C. Evaluation

1. Investigate: The effectiveness of the Coping MSTP.
   - Evaluation of the components of the Coping MSTP.
   - Identify whether coping skills can be taught to enhance effective coping.

2. Identify: What recommendations and Mental Skills Training techniques can be offered to help develop coping strategies in female field hockey players.

CHAPTER TWO

Review of Literature

The following review of literature is divided into five sections. The first section contains a background and brief description of elite hockey, while the second examines the concepts of stress and coping. The third section examines the importance of coping strategies in maintaining peak performance and the coping process. Section four reviews literature on coping styles, coping assessments and stress coping models; and section five reviews performance and mental skills training programmes.

Elite Field Hockey

Competitive Sport

Lavallee, Grove, Gordon and Ford (1998) fundamentally defined competitive sport, in terms of the requirements it imposes on athletes, as “an organized sporting activity in which training and participation are time-consuming, and in which the level of performance meets relatively high standards of expectations.” (p. 241). Involvement in competitive sport for serious athletes is a self-defining part of their identity. It is emotionally and physically intense, and of great importance to them (Murphy, 1995).

Because of the relatively uncertain, dynamic and evaluative nature of competitive sport, it places elite athletes under high levels of physical, psychological, and emotional stress (Hardy et al., 1997). Undoubtedly, competition places athletes in situations where their sport skills are evaluated by some known standard, which often are viewed publicly, judged and evaluated by significant others (Hodge, 1994). Such situations can be viewed by athletes as threatening, especially if the events are very important to them, and/or they doubt their ability to meet the demands of these situations (Hodge, 1994).

Field Hockey (Hockey)

Hockey is a team sport played by a large number of people, from young children to mature adults, in more than 80 countries (Anders & Myers, 1999). The swift moving, skilled-based style of hockey makes it an exciting, challenging and enjoyable sport for everyone, including players, coaches, administrators and spectators. While hockey encompasses many components found of other sports, a notable difference between hockey is that it has a number of specific technical skills. One prominent New Zealand hockey selector commented that it was a highly skilled game with an array of dimensions.

> Hockey is such a diverse game nowadays. Players have to be exceptionally talented at reading the game and anticipating the play. It is exciting because it is a fast, dynamic and uncertain game. The ball moves quickly, constantly changing the dynamics of the game. One moment a team can be hot on attack then next moment they find themselves under extreme pressure on defence. Also the strong skill base of the game makes it challenging. There are several different styles of hits, dribbles, flicks, pushes, and a variety of tactical formations, providing players with a real variety of technical aspects to grapple with. Naturally, such diversity makes hockey an extremely exciting spectator sport, as well as an exciting and challenging game to play. P. Barwick (personal communication, 2004).

Hence, hockey is a demanding sport requiring much practice and competence in a range of technical skills. Physically, hockey players need to execute a wide range of fundamental techniques rapidly and skillfully. Success in hockey demands intelligence, anticipation and an ability to “read the play”. In terms of physical prowess, a hockey player needs good body balance, muscular strength, aerobic endurance, flexibility and great hand-eye coordination (Anders & Myers, 1999).

Wein (1981) is renowned for his theories, techniques and extensive coaching experience in hockey. Subjectively, he explained the diversity of movement, skill, and intellect of the game.

> The game of hockey involves an extraordinary range of movement: running forwards, sideways and backwards with or without the ball, sudden stops, feinting, body-swerving, as well as the skills of pushing, hitting, flicking, dribbling, and so on. Modern hockey requires not only that a player has mastered all these movements and knows how to use them at precisely the right time, but also that he can execute them quickly and accurately (Wein, 1981, p. 10)

Other literature (Whitaker, 1986; Anders & Myers, 1999) confirms the comments of Wein (1981), regarding accuracy and speed of reaction, speed-strength, general stamina, mobility and anticipation were often referred to by participants as key sporting abilities needed for hockey. These abilities are synonymous with most team sports where there are a variety of components/or aspects to work on that contribute to overall fitness and skill competency. What is unique to hockey, as expressed through the literature, is the extensive range of specific technical skill components involved, which provides more challenges to participants compared with a number of other team sports.

Coping, Anxiety and Women

It appears that women differ somewhat from men in how they cope. Women are more susceptible to anxiety and use more emotion in coping than do men (Endler & Parker, 1990; Maccoby & Jacklin, 1974; Ptacek, Smith & Dodge, 1994). Anshel, Williams & Hodge (1997) found that gender differences existed for certain stressors (e.g., a bad call, opponent's successful performance and pain). However, no differences were found for stressors such as making an error, environmental factors or a cheating opponent. In addition, they found that gender differences existed as a function of task- and emotion-focused coping. Females often more than males used approach-emotion coping in response to a bad call and a cheating opponent.

Though somewhat contradictory to previous literature, Anshel et al. (1997) also found that female athletes preferred approach-emotion coping. It has been found that women use passive coping strategies more often than men (Billings & Moos, 1981). Also it has been argued that women are more likely than men to avoid stress-relevant information and/or use adaptive coping strategies or styles (Miller & Kirsch, 1987).

Concepts of Stress and Coping

Over the past 15 years sports psychology researchers have paid increasing attention to the important phenomenon of coping and elite athletes' success. However, despite considerable research examining the concept of coping, little research has been applied to help athletes actually cope more effectively. Hence, this study sought further applied research so that fruitful/substantial information would be gained to assist both hockey coaches and players.

In general, coping is the way athletes attempt to deal with the situational demands of competitive sport. Competitive athletic performance is derived from one's athletic skills and psychological states (Park, 2000). Therefore, given the importance of coping to the success of elite athletes, it is surprising that little research to date has been devoted to the area of coping skills programmes (Hardy, Jones, & Gould, 1996; Nicholls, Holt & Polman, 2005).

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Previous studies have revealed a lack of research examining stress and coping in the context of successful elite athletes (Crocker & Graham, 1995; Gould, Eklund & Jackson, 1993; Park, 2000; Scanlan, Ravizza & Stein, 1989). Thus there is a clear need for further research to examine coping in a variety of sports, including team sports. Despite research examining coping behaviours of athletes (Gould, Eklund & Jackson, 1993; Gould, Finch & Jackson, 1993a; Crocker & Graham, 1995; Crocker & Isaak, 1997; Dale, 2000; Giacobbi & Weinberg, 2000), more research is required on the coping efforts of a variety of athletes. As stated by Giacobbi and Weinberg (2000), research needs to focus on certain sub-groups of athletes, such as college athletes, elite or professionals.

Stress

As previously mentioned, competitive sports such as hockey provide an abundance of situations that could be potentially stressful. Stress is one of the most salient factors facing athletes and requires athletes to have a repertoire of cognitive and behavioural coping skills to manage competitive stressors (Gould, Guinan, Greenleaf, Medbery & Peterson, 1999; Crocker & Graham, 1995; Madden, 1995). However, in order to understand coping, and how coping strategies impact on performance, one must first understand the stress process.

Stress has been defined by researchers in a number of different ways and these inconsistencies have led to a poor understanding. In addition, Gould and Krane (1992) reported that the term stress has been used interchangeably with *tension* and a*nxiety*. Some researchers have defined stress as a situation- or stimulus- induced variable that challenges the response resources of an individual. Other researchers have defined it as a physiological or emotional reaction to an environmental event. Lastly, some researchers believe stress is a dynamic process that involves interaction between the environment and personal factors (Lazarus & Folkman, 1984; McGrath, 1970; Smith, 1986a).

According to this last process definition, it is how an individual appraises and copes with a stressor that determines its impact. In essence, athletes only become stressed if they feel threatened and/or perceive themselves unable to meet the demands of a situation. Specifically, using a process perspective, stress is viewed as "a (perceived) substantial imbalance between the demand and response capability, under conditions where failure to meet that demand has important (perceived) consequences" (McGrath, 1970, p. 20). In addition, the term *stressor* refers to the source of stress or situational demand, whereas the term *anxiety* is a potential outcome of the stress process. Hence, whether an athlete perceives a situation to be a challenge, as opposed to a threat, has great implications on the level of stress experienced, and on how the athlete copes under the circumstances. In addition, this perspective does not view the competitive situation as stress-inducing, or the stable personality factors of athletes (e.g., mental toughness) as a strong predictor of stress, but rather an athlete's cognitive appraisal of

the situation and his/her available coping resources. Lazarus and Folkman (1984) argue that, when no threat is perceived, or when coping resources are perceived to be adequate to deal with the situation, little stress will be experienced. However, athletes will experience higher levels of stress when a high degree of threat is perceived and/or coping resources are perceived to be inadequate.

Gould and Krane (1992) believe that there are four advantages to viewing stress as a process: (1) stress is defined as a sequence of events leading to a specific behaviour, rather than being viewed in an emotional context; (2) stress is thought of in a cyclical fashion rather than being linear; (3) stress is viewed as either positive or negative, (4) the emphasis is on the individual's perception of the situation, rather than essentially the situation itself.

The terms *eustress* and *distress* have been aligned with the view that stress is either positive or negative. Respectively, *eustress* (positive stress) appraisal is probable when the perceived imbalance between demands and resources is optimally challenging (Selye, 1974), whereas *distress* (negative stress) is likely when the perceived demands of the situation significantly outweigh the perceived resources.

As previously stated, stress is an integral part of the coping process. Lazarus and Folkman (1984) argued that stress consists of three processes: primary appraisal, secondary appraisal, and coping. Primary appraisal is referred to as the process of perceiving the threat; secondary appraisal is referred to as the process of cognitively thinking of a potential response to the threat; and coping is executing the chosen response.

Though a number of conceptual models have been developed to explain the stress process, Smith's (1986a) conceptual model has been used most commonly within sport research. Smith's model comprises situational, cognitive, physiological and behavioural components (see Figure 1). Specifically, the *situational* component emphasises that stress is a result of the interaction between situational demands and resources. The *cognitive* component concentrates on the way athletes cognitively appraise the demands and resources during a competitive situation. The *physiological* component is the physiological response to the cognitive appraisal or vice versa. The *behavioural* component focuses on the coping and task behaviours that occur in

response to a stressful situation. In addition, the model recognises that individual differences in personality and motivational factors could influence the stress process.

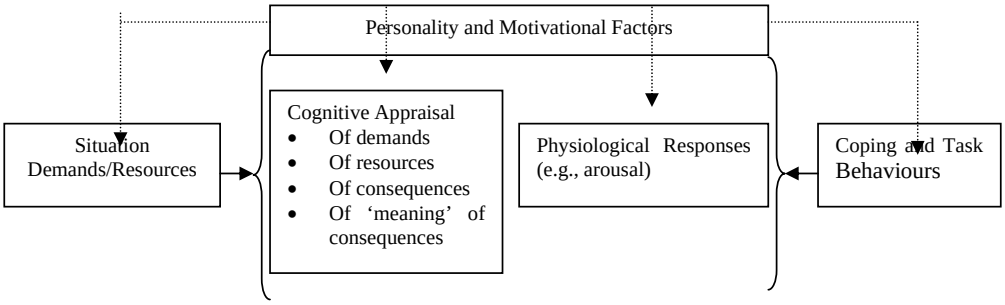

Figure 1. A conceptual model of stress showing hypothesised relationships among situational, cognitive, physiological and behavioural components (Smith, 1986a).

Stress is not necessarily detrimental to an athlete's performance. It is commonly conceived that some stress is necessary to optimise performance by bringing out the best in an athlete. It can help athletes achieve and maintain optimal arousal and enhance them to perform to a higher level (Anshel, Gregory & Kaczmarek, 1990). It is when the demands of the situation surpass an athlete's resources (ability to cope); and important goals, values and self-identity are perceived to be endangered; that a decrease in sporting performance is likely to occur (Mahoney, Gabriel & Perkins, 1987; Orlick & Partington, 1988; Williams, 1986).

When the levels of stress become persistent or chronic, the results can be adverse. For example, chronically unpleasant sources of stress can result in demotivation, performance slumps, burnout and even withdrawal from competitive sport (Smith, 1986).

Stress is considered to directly influence sport performance (Smith, 1986b). Specifically, Anshel et al. (1990) inferred that acute stress from a sport-related viewpoint usually occurs when athletes are suddenly confronted with a negative or unpleasant situation. Athlete responses to these situations can decrease ability to pay attention, less risk taking, narrowing of focus and reduction in mental preparedness to perform (Anshel, 1990). Anshel went on to define acute stress as being "inherently

debilitating to immediate subsequent performance" (p. 59). Action must be taken to prevent and manage such stress in order to optimally maintain performance.

A variety of techniques exist to assist in preventing and managing stress. A few examples include Smith's (1980) Stress Management Training Program (cited in Anshel et al., 1990), Meichenbaum's (1985) Stress Inoculation Training, and a variety of other relaxation, thought-stopping, mental imagery and bio-feedback (Orlick, 1986) techniques. In addition, several researchers have investigated coping in relation to sport-induced stress (Gould, et al., (1993a & b); Gould & Weinberg, 1985; Scanlan, Stein & Ravizza, 1991).

The effect of stress has significant implications for athletes, whether it be performance-related issues or, even more serious, well-being issues. It is important to understand the sources of stress salient to athletes in order to create more positive sporting experiences and prevent the adverse effects of stress. This study examines sources of stress, which are specific to elite female hockey players, to gain a greater understanding and knowledge of coping and stress within the sport of hockey.

Sources of Stress

The majority of studies examining stress in sport, have centred on competition-induced stress, experienced prior to (Feltz, Lirgg & Albrecht, 1992), or during the competition (Madden, Kirkby, McDonald, Summers, Brown & King, 1995). The common sources of stress identified in previous research included: concerns about losing, doubting ability, worries about poor performance, having to be consistently good, interpersonal conflict, balancing sport and other commitments, having a reduced social life due to training demands, coaching styles, injuries and limited financial resources. Other research (Feltz, et al, 1992; Gould, Horn & Spreemann, 1983, Gould & Weinberg, 1985) has identified several sources of stress in competition. These include concern about losing, doubting ability and worrying about poor performance.

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It is documented that the competition itself is the most salient part of an athlete's sporting experience. However, it actually only comprises a minimal part of the overall sporting experience. The literature is now beginning to examine the sporting experience

as a whole (Gould et al., 1993b; Noblet & Gifford, 2002; Scanlan et al., 1991). Common sources of stress identified by these studies include worries about performing poorly, having to be consistently good, fear of failure, interpersonal conflict, family disturbances, not being accepted by peers, balancing sport and study commitments, having a reduced social life due to training demands, coach bias, media attention, injuries, and limited financial resources.

Sources of Stress in Team Sports. Few previous studies have examined sources of stress in the setting of team sports. Noblet and Gifford (2002) noted the under-representation of team sports in previous literature and support the need for more studies to investigate the sources of stress experienced by those participating in team sports across a variety of sports, such as hockey.

They found that not all the sources of stress in professional Australian footballers were the result of the competitive event. In particular, non-competition sources of stress were lack of feedback, constant public scrutiny, job insecurity, long training sessions, and difficulty balancing football and other job/study commitments. In addition, the competition sources of stress were listed as constant pressure to perform, high performance expectations and poor form. Noblet and Gifford (2002) highlighted that, when developing stress-management programmes, both competition and non-competition sources of stress need to be considered. In support, Holt and Hogg (2002) suggested that the majority of the coping efforts of participants in team sports were created by the team environment and subculture, rather than any psychological demands of playing the sport.

Because of the team orientation in football, it presents some key differences from individual sports. Specifically, a lack of feedback was identified as a source of stress in football. This hardly surprising considering the coach-player ratio; players in team sports have less direct one-on-one contact with their coaches when compared with individual sports. In addition, missing family/friends, accommodation problems and job insecurity were also identified as specific to football.

Such research displays the importance of understanding situation-specific stressors. From a practical viewpoint, understanding the sources of stress that are unique

to a specific situation has implications for interventions, such as mental skills training programmes.

Organisational Stress. Preparing for competitive sport places elite athletes under substantial pressure and a wide range of stressors are experienced. Alongside the apparent stressors involved in the competition itself, a number of other stressors arise from social, organisational, political, occupational and cultural sources.

In 1982, Shirom defined organisational stress as "work-related social psychological stress" (p.21), where there is challenging interaction between an employee and the work environment to which they are exposed. Shirom (1982) stated that it was neither the employee nor the environment alone that was inherent to the stress process but, more importantly, the employee's cognitive appraisal of the work situation.

In accordance with Shirom's (1982) findings, Woodman and Hardy (2001) created a theoretical framework of organisational stress in sport. Woodman and Hardy (2001) defined organisational stress for an individual as "the stress that is associated primarily and directly within which he/she is operating"(p.208). They argued that issues directly related to sport organisations (e.g., coaching styles) should be viewed as possible sources of organisational stress. Issues not related directly to sport organisations (e.g., relationship problems) should not be considered as organisational stress, but they might still be sources of stress.

Woodman and Hardy (2001) undertook a case study of 15 elite athletes to investigate organisational stress within sport. Specifically, they examined four main categories: environmental issues, personal issues, leadership issues and team issues. The results revealed that the main environmental issues found were selection, the training environment, and finances. The main personal issues were nutrition, injury, goals and expectations. The main leadership issues were coaches and coaching styles. Lastly, the main team issues were team atmosphere, support networks, player roles and communication.

Later, Fletcher and Hanton (2003) investigated a wide range of sports in relation to potential sources of organisational stress. Using Woodman and Hardy's (2001) theoretical framework, they also examined the four main categories. Their results

showed that the main environmental issues were selection, finances, training environment, accommodation, travel and competition environment. The main personal issues were nutrition, injury, and goals and expectations. The main leadership issues were coaches and coaching styles, and the main team issues were team atmosphere, support networks, roles, and communication. These findings, as well as work by Gould, Jackson and Finch (1993b), and Scanlan, Stein and Ravizza (1991), demonstrate the significance and influence of organisational stress when preparing for major sporting competitions.

Coping

Definition of Coping. Lazarus and Folkman (1984) defined coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). In addition, Lazarus and Folkman (1984) stated that coping is a dynamic and continually changing process in which the coping strategies utilised by an individual are dependent on the situation. Lazarus (1991) argued that the consequences, or what is at stake for an individual in a situation, will influence cognitive-emotional behaviour. In addition, coping is not viewed as automatic behaviour but requires conscious effort by an individual to handle stressful situations. This definition is based on the view that coping is a transactional process (Crocker & Isaak, 1997).

The transactional process perspective has proven to be the most salient of a number of models/perspectives that have been proposed to define coping. Other models/perspectives include the animal behavioural perspective, the psychoanalytical perspective, and the trait/dispositional perspective (Folkman, 1992). Thus coping, like stress, is not an easily defined concept. However, the transactional process perspective believes coping is a dynamic process that is influenced by an interaction between environmental and personal factors (Lazarus & Folkman, 1984).

There are some advantages in viewing coping as a process has some advantages (Hardy et al., 1996). Specifically, coping is thought of as a dynamic sequence of steps

that incorporates both cognitive and behavioural strategies/efforts to manage the outcomes of stress process (Lazarus & Folkman, 1984). Stress is viewed as a process and not a static state. In addition, this perspective incorporates a variety of purposeful cognitive and behavioural responses such as appraising the situation to make use of stress management techniques. It considers all purposeful attempts to manage stress, whether or not the attempt is effective (Hardy et al., 1996). Such inferences emphasise the importance of both personality and situational aspects. Though the transactional process perspective is prominent, some caution must be taken as it is not universally accepted (Hardy et al., 1996).

The Coping Process and Strategies for Coping

The Coping Process

The coping process is complex in that an individual simultaneously tries to manage the stressor, the environment and emotions (Gould, Eklund & Jackson, 1993). Coping is thought to mediate between the demands of the environment, and the emotions and behaviours required to cope with those demands (Bouffard & Crocker, 1992). While the coping process involves strategies/responses that attempt to lower arousal and/or minimise the importance of, or manage, the stressor (Lazarus & Folkman, 1984), the appraisal of the situation is central to the process.

Lazarus and Folkman (1984) argued that it is vital to recognise the influence of both the primary and secondary appraisals in order to understand the stress process fully. The stress process begins with a primary appraisal of the situation and the person-environmental demands placed on an individual. This is where an individual evaluates the personal significance of a stressor or stressful situation and the effect of this stressor (e.g., “What is at stake?” “How important is this?”). Primary appraisals determine whether the demands of a situation are potentially stressful. They are interpreted in a number of ways: commonly they can be perceived as a threat, a challenge, or by a harm-loss evaluation. Lazarus (2000) explained that a threat should be thought of as an

evaluation in regard to the potential for harm. On the other hand, a challenge is an appraisal in which the situation is thought to be difficult but where it is anticipated that gains will be made. Finally, harm-loss appraisals are best understood as an evaluation in which a loss has already occurred.

The secondary appraisal follows the first, and is where the individual judges his/her ability to deal with the stressor and the likely outcomes of the situation. In order to judge one's ability to deal with the stressor, the individual determines the stability and status of his/her coping resources (i.e., whether the individual has sufficient resources to cope). It is at this stage that various coping strategies/responses and options are evaluated, and it is the degree to which individuals' feel they can or cannot do something about the stressor that determines how well they cope (e.g., "What can I do about the stressor?").

Categories of Coping Strategies/Responses

Coping strategies are the cognitive and behavioural actions taken in stressful situation (Compas, 1987). In relation to the coping process they are the strategies/responses made in reaction to the cognitive appraisal of such a situation (Lazarus & Folkman, 1984). A wide variety of cognitive and behavioural strategies are used by individuals (Carver, Scheier & Weintraub, 1989; Crocker, 1992) and, for one particular stressor, individuals can exhibit a number of coping strategies/responses (Hardy et al., 1996). Specifically, Carver et al. (1989) found a number of conceptually distinct types of coping strategies, such as seeking emotional or social support, active coping, planning and mental disengagement.

Researchers have categorised the types of coping strategies into taxonomies or more overarching coping dimensions. Although there is disagreement about the number of coping dimensions (Bouffard & Crocker, 1992), the most widely accepted categories are Lazarus and Folkman's (1984) problem-focused and emotion-focused coping. Specifically, Lazarus and Folkman (1984) defined two different types of coping that individuals use in response to stress — emotion-focused and problem-focused coping efforts.

Problem-focused coping concentrates on the cognitive and behavioural strategies/efforts used to manage or alter the problem causing the stress and/or influence the person/environment relationship. Problem-focused coping involves proactive strategies that seek to resolve the problem, such as problem-solving, information gathering, planning, and increased effort to help change the problem causing the distress. In contrast, emotion-focused coping concentrates on strategies/efforts used to regulate or manage the emotional distress associated with the stressor. Emotion-focused coping involves reactive strategies such as denial, acceptance, wishful thinking, venting of emotions, or mental and behavioural withdrawal to help regulate emotional arousal or distress. Indeed, emotion-focused coping is not aimed at solving the problem but at managing the consequences of a defensive reappraisal of the situation (Madden, Summers & Brown, 1990).

Folkman and Lazarus (1980) believed individuals are more likely to use problem-focused strategies when they perceive they can do something about the stressor causing them distress. If they perceive that they can’t do anything and that the stressor must be endured, then individuals will predominantly use emotion-focused strategies. In addition, Crocker (1992) agreed that problem-focused coping is used in situations amenable to change, whereas emotion-focused strategies are used in situations which are not amenable to change. For example, Carver et al. (1989) found that more subjects engaged in problem-focused strategies (such as active coping, planning, suppression of competing activities and seeking social support for instrumental reasons) when they perceived the stressful situation as amenable to change, than those who perceived the situation as something that had to be tolerated. They also found variations in coping in reference to the appraised importance of the situation. More emotion-focused strategies (such as venting of emotions, denial and seeking social support for emotional reasons) were used when the situations mattered more.

In addition to problem-focused and emotion-focused coping, Endler and Parker (1990) proposed another category for coping strategies/responses — avoidance-focused coping. They anticipated that avoidance-focused coping would most commonly be used for short-term stressors where consequences would be short-lived. Specifically,

avoidance coping was referred to as efforts to physically or mentally disengage from a stressful situation.

Coping in Competitive Sport

Research interest in coping in sport is gradually increasing (Dale, 2000; Giacobbi & Weinberg, 2000; Giacobbi, Foore & Weinberg, 2004; Holt & Hogg, 2002). A qualitative study conducted by Gould, Eklund and Jackson (1993) examined how athletes in the U.S. Olympic wrestling team coped with adversity, expectations and unexpected outcomes during the 1988 Seoul Olympics. That study identified four key dimensions of coping behaviours: thought control strategies, emotion control strategies, task focused strategies and behaviour based strategies. These findings provided evidence that the coping efforts of elite athletes were a dynamic process and utilised multiple strategies, either simultaneously or in combination.

In addition, they found that the difference between medallists and non-medallists was their ability to cope with adversity. The medallists were more effective in coping because their strategies were better practised and more automatic than those of the non-medallists. As a result, medallists viewed adversity more positively and less threatening.

In a similar study, Gould, Finch and Jackson (1993a) examined the relationship between specific stressors and the coping strategies of national champion figure skaters when winning their titles. Forty percent of the skaters coped with the stress of competing by utilising the following strategies: rational thinking and positive self-talk, positive focus and orientation, social support, time management and prioritisation, pre-competition mental preparation, anxiety management, training hard and smart, isolation and deflection, and ignoring the stressor. It also emerged that the skaters used different coping strategies, depending on the type of stressor presented. Specifically, 75.8% of the skaters used pre-competition mental preparation and anxiety management, positive focus and orientation, and training hard and smart, to deal with stressful competitive situations and self-doubts.

Dale (2000) described the experiences of elite decathlon participants during their ‘most memorable performance’. Consistent with Gould and colleagues (Gould, Eklund

& Jackson, 1993; Gould, Finch & Jackson, 1993a), the coping strategies used by the decathletes varied. It is important to note that the participants' descriptions of their most memorable performances were not necessarily their best performances. Rather, it was in a competition where there were significant distractions, but the where the athletes had specific strategies to overcome them, and were able to perform well and focus on the task. Also of interest in that research was that, as in previous studies, the decathletes were very aware of other competitors. This is significant as, in decathlons and figure skating, opponents have little to do with others' performances.

The distractions described by athletes during competitions included worrying about other competitors, dealing with less-than-ideal practice situations going into competition, feeling fatigued and the dynamics of relationships with others. Once distractions were identified, athletes were able to effectively cope and deal with them. Six major strategies, consisting of both emotion-focused and problem-focused coping emerged, from these findings: imaging/visualisation; being aware of cues; reminders to compete only against self; confidence in one's training; consistency; and camaraderie. In particular, four of the six coping strategies were problem-focused, with only confidence in one's training and camaraderie being emotion-focused. In conclusion, this study revealed similarities in coping strategies among athletes. It was evident that the athletes in this study were well practised and were able to deal with distractions effectively, which is why they did not describe their distractions as highly stressful.

Coping Strategies

It is not unusual that applied sport psychologists have tried to describe, explain and control coping behaviours, coping influences performance (Giacobbi & Weinberg, 2000). The literature includes a variety of coping strategies used to improve athletes' performances. These include imagery training, attention focus, relaxation techniques, positive thinking, self-talk techniques, goal setting and social support (Gould et al., 1993a; Gould et al., 1993b; Thomas & Fogarty, 1997; McPherson, 2000; Wainlin, Hrycaiko, Martin & Mahon, 1997).

As previously stated, Gould et al. (1993a) examined how the 20 members of the U.S. Olympic wrestling team coped with stress during the 1988 Seoul Olympics. Four dimensions of coping strategies were identified: thought control, task-focus, behaviour based and emotional control. Specifically, thought control strategies involved blocking distractions, positive thinking, coping thoughts, perspective taking and prayer. Task-focus strategies involved focusing on the task at hand and concentrating on goals to control athletes' thoughts. Behaviour based strategies involved following a set routine and controlling the environment (e.g., separating self from others, distracting self with other activities, spending time with positive people, avoiding irritants). Such behavioural strategies allowed the wrestlers to reduce uncertainty and keep their attention focused. Lastly, emotional control strategies involved arousal control (e.g., breathing control and relaxation) and visualisation techniques. In addition, the researchers found that the coping strategies assigned involved a dynamic process with a variety of strategies.

Gould et al.(1993b) interviewed 17 senior U.S. national champion figure skaters who won titles between 1985 and 1990. This study extended the literature by investigating all types of stress, rather than focusing only on performance stress. Findings revealed eight general dimensions of coping strategies: rational self-talk; positive focus and orientation; time management and prioritisation; pre-competition mental preparation and anxiety management (such as relaxation, visualisation); training hard and smart/effectively; social support (assistance from coach, talking with friends and family), and isolation and deflection (e.g., not letting things get to them, avoiding or limiting media contact); and ignoring the stressor. The study also found that the coping strategies involved were dependent on the specific stressor experienced by the figure skaters.

More recently, Park (2000) examined the coping strategies used by Korean national athletes in more that 40 different sports and seven general dimensions were found. The most-mentioned coping strategies were psychological training (e.g., mental training and "psych-up"), training strategies (e.g., training, opponent observation/analysis, strategies/tactics), somatic relaxation (e.g., physical relaxation and condition control), hobby activities (e.g, listening to music, reading, watching

videos/movies), social support (seeking advice and talking to others), prayer and substance use (e.g., tobacco, alcohol or drugs). The dimensions of psychological training, training/strategies, somatic relaxation, and social support dimensions paralleled those found in the Gould et al. (1993b) study on U.S. figure skaters.

Coping Styles, Coping Assessments and Coping Models

Coping Styles

Coping style or disposition is an individual's preference for using particular coping strategies (Cohn, 1987; Endler & Parker, 1990). Specifically, coping styles relate to the consistent use of coping behaviours/strategies that characterise an individual's responses across situations. Whether individuals have a coping style/disposition, or whether coping is situation specific, is a contentious issue in coping literature (Udry, 1997). Some researchers have assumed that athletes have a tendency to respond in a predictable manner when confronted by a specific situation. It is related to that individual's personal goals, beliefs and values (Carver et al., 1989; Compas, 1987). Therefore, it could be argued that coping styles/dispositions are useful predictors of coping behaviours. Carver et al. (1989) stated that "people do not approach each coping context anew, but rather bring to bear a preferred set of coping strategies that remain fixed across time and circumstances" (p. 270). However, other researchers have rejected these assumptions and suggest that coping styles/dispositions are not good predictors of an individual's behaviours when confronted by a stressful situation (Folkman, 1992; Lazarus & Folkman, 1984).

Research on coping styles/dispositions has identified two independent dimensions — approach-focused and avoidance-focused coping (Roth & Cohen, 1986). Approach-focused coping represents a sensitisation, engagement, vigilance or attention; whereas avoidance-focused coping represents repression, disengagement or rejection.

Approach-focused coping is a process whereby an individual takes steps to deal with a stressor, such as pre-planning his/her coping strategies (e.g., 'what if' scenarios), increasing efforts to reduce stress, and taking some form of direct action (Anshel,

Williams & Hodge, 1997; Endler & Parker, 1990). Approach-focused coping has been found to be most transferable when the source of stress is known, the situation is controllable, and/or the outcome measures are long term (Roth & Cohen, 1986). Approach-focused strategies are thought to be very useful as they allow appropriate action, and enabled athletes gain control and take advantage of the situation (Roth & Cohen, 1986).

Avoidance-focused coping is the process of turning or moving away from the stressor or threat-related cues, such as ignoring or discounting the importance of a stressor, engaging in another task from that involving the stressor, or seeking out other people (Anshel et al., 1997; Endler & Parker, 1990). Avoidance-focused coping is found to be preferred when the stressor is not clear and the situation is uncontrollable, where emotional resources are limited, and where the outcome is short term. The importance of the event or the personal meaning to the individual will influence the effectiveness of avoidance-focus coping (Roth & Cohen, 1986). Avoidance-focused coping has been found to be useful for reducing stress or preventing the effects of anxiety.

Researchers have begun to examine how personality characteristics such as trait anxiety can influence coping (Finch, 1993; Giacobbi & Weinberg, 2000; Ntoumanis & Biddle, 2000). Finch (1993) found that trait anxiety influenced the type of coping strategy used. High trait-anxious athletes used emotion-focused and maladaptive coping strategies more than those who were low trait anxious.

It has been suggested anecdotally that athletes often cope with stress by blocking out harmful information while still incorporating information that influences or contributes to performance success (Anshel, 1990). In addition, Anshel and Kaissidis (1997) found that, although competitive basketball players predominantly use approach-focused coping, they will use avoidance-focused coping in cases of acute stress where they believe they have little control over the event.

Coping Consistency. The consistency of coping behaviours has been a controversial area of study. Specifically, this issue examines the extent to which an individual's coping behaviours are consistent or stable, as opposed to varying or changing from one situation to the next (Giacobbi & Weinberg, 2000). As stated previously, one dispositional view assumes that individuals have preferred coping behaviours that are consistent over time and situations (Carver, Scheier & Weintraub, 1989). Others assume that coping is a dynamic variable that changes as a result of the person × environment relationship. In the transactional model of stress and coping, Lazarus and Folkman (1984) suggest that the person and the environment have a reciprocal bi-directional relationship that changes with an alteration in the nature of that relationship.

Previous studies have examined coping consistency. Bouffard and Crocker (1992) studied individuals with physical disabilities and found that individuals did not use the same coping responses across settings. Anshel and Kaissidis (1997) also proposed that coping is a function of both the person and the environment. Crocker and Isaak (1997) examined 25 age group swimmers' coping responses across both training sessions and competitions. They found that coping responses may vary across situations. In training, swimmers were consistent in their coping strategies but they were not consistent across competitive swimming races which required different coping strategies, depending on the stressor. Crocker and Isaak (1997) concluded that these findings were a result of the differences in the nature and demands of training when compared with competitions.

However, results from the Giacobbi and Weinberg (2000) study is not in accord with the previous research by Bouffard and Crocker (1992) and Crocker and Isaak (1997). Specifically, the 2000 study indicated that coping was a stable disposition rather than situationally determined. Although it was demonstrated that the situation had some influence on individuals' coping responses, it was argued that this could be related to the amount of perceived stress from the situation. Giacobbi and Weinberg (2000) speculated further that situations that elicit similar levels of stress produce similar coping responses, as opposed to situations that elicit varying levels of stress. Such differential results may be due to methodological differences or the varying demands of different athletic

situations (Giacobbi & Weinberg, 2000). Therefore it is evident that further research is needed on examining athletes' coping responses to various levels of stress. Previous research (Gould, et al., 1993a; Stone & Neale, 1984) also revealed that the use of coping strategies was consistent with and/or dependent on the individual.

In view of the contention surrounding coping consistency, Martin (1989) suggests that "what an individual does (i.e., coping responses) is potentially more important in mediating the impact of stress than what the person is (e.g., personality variables) or has (e.g., social support)" (p. 214). Coping effectiveness can be considered in terms of short-term outcomes (i.e., where the athlete is able to manage a specific stressor at the time it occurs), or long-term outcomes (i.e., general adaptation over time) (Nicholls et al, 2005). Recent studies have shown that effective coping is related to the choice of coping strategy in a particular context (Eubank, Collins & Smith, 2000; Gaudreau, Blondin & Lapierre, 2002; Pensgaard & Duda, 2003). Specifically, coping strategies that facilitated performance were maintaining positive self-statements, positive focus, planning, active coping and optimising emotions. Conversely, negative coping strategies involved negative self-talk statements, preoccupations with significant others, lack of concentration and uncertainty.

Coping Assessments

In an endeavour to measure coping, a number of coping assessments have been developed, such as the Ways of Coping Checklist (WCC), COPE Inventory, or Athletic Coping Skills Inventory-28 (ACSI-28). The WCC was developed by Folkman and Lazarus (1980), and then revised and modified (1985). It consisted of eight functionally distinct coping scales that proposed to measure how an individual coped with a certain stressful event. Though researchers have modified the WCC to be used within a sports setting (Crocker, 1992; Madden, Kirkby & McDonald, 1989), the coping scales have been found to be somewhat problematic. According to Endler and Parker, 1990; Parker & Endler, 1992), the WCC has suffered from a number of problems, such as having only weak empirical validation of the coping subscales, inadequate construct validity, unstable factor structure and low test/retest reliability.

Carver et al. (1989) developed a coping inventory known as the COPE. COPE was developed because of the problematic nature of and general dissatisfaction with the WCC. Since it has been developed, the use of the COPE, or a modified version, has been well supported (Crocker & Graham, 1995; Eklund, Grove & Heard, 1998; Finch, 1993; Giacobbi & Weinberg, 2000; Gaudreau, Blondin & Lapierre, 2002; Pensgaard & Ursin, 1998; Pensgaard & Duda, 2003).

Finch (1993) used the COPE to study 148 collegiate female softball players by examining the relationship between specific coping strategies and performance. Results revealed that coping was significantly related to performance, but it only accounted for a low percentage (3% - 6%) of the variances in batting and fielding averages. Also, results found that female softballers used a range of coping strategies to deal with stress/stressful situations. More prominently, the female softballers used more adaptive and emotion-focused coping strategies, and less maladaptive and problem-focused strategies.

In an investigation of the coping efforts of Norwegian athletes at the 1994 Winter Olympics, Pensgarrd and Ursin (1998) also used the COPE. Results revealed that the most prominently reported stressful experiences were expectations and external distractions, with such experiences occurring prior to the competition for the majority of the athletes. Specifically, to deal with such stressors, athletes used problem-focused strategies (e.g., planning and active coping) all the time. ‘Cognitive defensive strategies’ (Pensgarrd & Ursin, 1998) included strategies such as denial and seeking social support for emotional reasons were adopted mostly during the days immediately before and after competition. Furthermore, no relationship was found between the type of stressor and the strategies used (problem-focused versus cognitive defensive coping strategies), which implies that athletes used different coping strategies to cope with the same stressor.

Researchers such as Hardy et al. (1996) have suggested that the COPE has been proven to be a reliable measure of coping within the sporting environment. Therefore, the COPE was chosen for this current study as it was important for the quality of the later parts of the study (e.g., intervention) to have a reliable measure of the coping strategies used by current elite female hockey players.

Smith, Schutz, Smoll and Ptacek (1995) developed the Athletic Coping Skills Inventory-28 (ACSI-28), which is a multidimensional measure of sport-specific coping skills. Specifically, the ACSI-28 consists of seven sport-specific subscales that contribute to an overall general measure of mental coping skills. Though the ACSI-28 has some merit in being able to determine the level of coping skills present and is a measure of an athlete's ability to cope, researchers have suggested that the inventory has several limitations (Crocker, Kowalski, & Graham 1998; Hardy et al., 1996).

Model of Coping

To help simplify the complex nature of coping, Hardy, Jones and Gould (1996) proposed that a comprehensive model, which integrated conceptual and empirical research would provide further understanding of coping. Hardy et al. (1996) adapted and integrated Folkman, Chesney, Mckusick, Ironson, Johnson and Coates' (1991) coping model, and McGrath's (1970) model of stress. Their model was divided into two parts: the first part addressed the stress appraisal, while the second addressed coping. The integrated model is displayed in Figure 2.

The model begins with the stress appraisal process, where some mental or physical (environmental) demand is placed on the athlete (Box A). For example, a hockey player must demonstrate a career-best performance to be selected for the New Zealand team. How the athlete appraises the situation (Box B) will determine whether the environmental demand is perceived as stressful or not. Folkman and Lazarus (1985) proposed that appraisals take two forms — primary appraisal (perception of threat, harm, loss, challenge) and secondary appraisal (thinking regarding a potential response). Whether global stress (Box C.1) is perceived, is determined by the result of the combination of both primary and secondary appraisals. For example, if the above hockey player is not performing to the best of her ability and perceives this to be harmful for her chances of being selected, and also doesn't believe that she has the resources, or isn't able to think of a response to improve her game, global stress will inevitably result. The importance of identifying the cause of the stress (Box C.2) is emphasised. The model also takes into consideration the athlete's ability to influence the

source(s) of stress and the perceived controllability of the stressor(s) (Box C.3). Proceeding with the appraisal, an athlete's psycho-physiological state will be influenced by the levels of cognitive and somatic arousal and activation (Box D). In addition, the stress appraisal process is also influenced by an athlete's personality and motivational factors (e.g., optimism, self-confidence, trait anxiety and self-esteem) (Box K).

The second part of the model represents the coping process. It reflects coping efforts or attempts to deal with the athlete's resulting psycho-physiological stress state (Box K). Specific coping behaviours or strategies (Box G) used by an athlete may impact on the coping outcomes — that is performance, health (wellbeing), mood or satisfaction (Box I). The coping situation match (Box H) reflects the adaptive or maladaptive nature of the specific coping resources. The athlete's coping disposition or preferred style (Box J), and the coping resources available to that athlete, also influence the coping process, particularly their coping efforts.

Hardy et al. (1996) added an exit box to the end of the model to represent a successful coping effort where stress has been reduced. An arrow represents the closed-loop nature of coping. Specifically, the model is circular and will continue until stress is reduced. Hardy et al. (1996) also pointed out that it is reasonable that a number of the components of the model will influence each other.

Summary of Coping Literature. The literature suggests that coping is a complex and dynamic process. The majority of research on coping has emulated the work of the Lazarus and Folkman (1984) transactional process model. Such studies have identified a variety of different coping strategies used by athletes to manage stressors, where the strategy and/or combination of strategies varies according to the stressor(s) encountered. Researchers have attempted to categorise such coping strategies. In general, the majority of the research has been descriptive, and several researchers have indicated the need for further study.

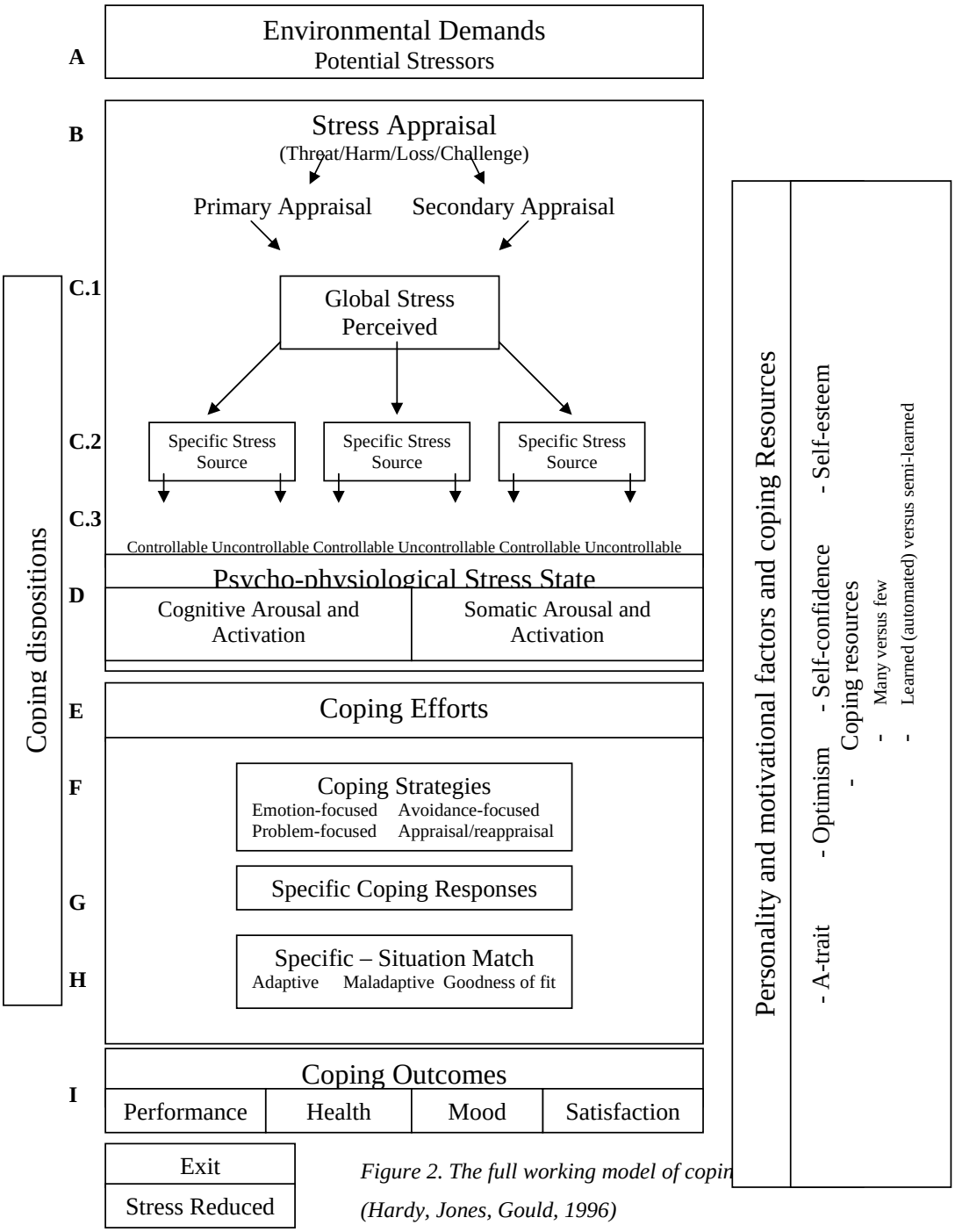

Figure 2. The full working model of copin

(Hardy, Jones, Gould, 1996)

Performance and Psychological Skills Training

Performance

In essence, performance is “the bottom line” of sport. Whether it is making the starting line-up, negotiating a contract, or implementing a highly-developed training programme, performance will always be a crucial factor. Performance-related issues are prominent in competitive sport, particularly because of sport’s evaluative and competing nature. Athletes are often expected to perform at crucial moments under extreme pressure. What determines a good athlete from a great one is the ability to perform when it matters.

Sophisticated training regimes are practised to help athletes consistently perform at the highest level. Obviously, in order to reach a high level of performance, athletes need to be able to endure and cope with long hours of strenuous training regimes, which can be both boring and tiring.

In addition, athletes need to cope with poor performance, injuries, bad luck, and a variety of controllable and uncontrollable factors (Bull, Albinson & Shambrook, 2002). In particular, poor performance is an adverse part of the competitive sporting experience. When athletes perform poorly, it can influence their self-esteem, create self-doubts and/or anxiety, and/or be a major source of frustration (Prapavessis & Grove, 1995). Athletes under extreme pressure can perceive situations as challenging, threatening, harmful, accepting, panicked or something they could manage. Such situations include perceived unfair umpiring decisions, performance slumps, injuries, conflicts, important competitions and critical moments. Athletes require the appropriate coping skills to deal effectively with these situations (Madden, 1995). If not, it could lead to poor performance, negative effects or even dropping out of sport altogether.

To facilitate a better understanding of performance in relation to mental skills, researchers must explore the central issues further. Indeed, there is a wealth of knowledge to be gained from the experiences of those directly involved in sport; both players and coaches. Orlick and Partington (1988) expressed that, in order to gain a greater understanding of the specific skills that athletes require for mental readiness and performance enhancement, they encourage future investigations to be guided by

athletes' and coaches' suggestions for effective techniques (Orlick, 1986; Orlick & Partington, 1986; Orlick & Partington, 1988).

Peak Performance. The recognition that mental and emotional processes play a crucial role in peak performance has increased interest by sport psychologist. Peak performances are thought to be those 'magic moments' of an athlete experiences where everything goes right and 'just happens', both physically and mentally. Peak performance is more accurately defined as an optimal performance standard and superior functioning (Jackson, 1992; Privette & Bundrick, 1997). It is assumed that peak performance is a result of both mental and physical factors (Williams & Krane, 2001). Athletes are most likely to experience peak performances when their skill levels match the demands of the situation (Csikszentmihalyi, 1990; Jackson, 2000). Therefore, the higher the skill level and demands, the more important psychological aspects become in achieving peak performance.

Flow and Peak Performance. Flow is also related to peak performance and positive outcomes in sport (Jackson & Roberts, 1992). Csikszentmihalyi (1990) considered flow to be "the state in which people are so involved in an activity that nothing else seems to matter" (p. 4). Flow occurs when an individual perceives a balance between the demands of the situation and their capabilities (Csikszentmihalyi, 1975). When athletes are in flow it does not necessarily mean that they will experience peak performances, but when athletes experience peak performances they appear to be in a state of flow. Jackson and Roberts (1992) suggest that flow may be a precursor to peak performance. During flow, athletes are not concerned about the outcome of an event because they perceive the demands of the situation to be within their abilities. Therefore, they are free to become immersed in the activity, and potentially enhance peak performance.

Previous research has identified dimensions of flow (Csikszentmihalyi, 1975; 1990; Jackson, 2000; Jackson & Csikszentmihalyi, 1999). The following dimensions were identified by athletes who were in a state of flow: (1) the challenge of the situation matches the skills of the athlete; (2) merging of action and awareness, where movement is effortless; (3) clarity of goals and direction; (4) unambiguous feedback that indicates

that what they are doing or direction they are taking are correct; (5) total and complete concentration on the task at hand; (6) paradox of control – a sense of being in complete control without fear of failure; (7) loss of self-consciousness; (8) transformation of time; (9) autotelic experience, where the activity is enjoyable and participation becomes its own reward. These dimensions are similar to those psychological characteristics reported during peak experiences by Ravizza (1977).

Specifically, Ravizza (1977) was one of the first researchers to examine athletes' subjective experiences of their 'greatest moments' in sport. Twenty male and female athletes were interviewed from different levels of competition and sports. Results revealed that over 80 per cent of the athletes reported the following perceptions: (1) loss of fear – no fear of failure; (2) no thinking of performance; (3) total immersion in the activity; (4) narrow focus of attention; (5) effortless performance; (6) feeling in complete control; (7) time/space disorientation; (8) feeling integrated and unified; (9) unique, temporary and involuntary experience.

Importance of Flow to Peak Performance. As previously stated, the optimal psychological state of flow has an underlying influence on peak performance (Jackson, 1996; Jackson & Roberts 1992). Therefore, in order to achieve peak performance, athletes need to ensure they are in an optimal psychological state (ideal performance state) to perform. Cohn (1991) ascertained that there was an increased likelihood of achieving peak performance when the proper conditions are established. Undoubtedly, coping with stress and the demands of competitive situations is vital to maintaining conditions that facilitate peak performance. Jackson's (1992) study of flow revealed the importance of coping with a number of factors, such as situational conditions, during competition.

Loehr (1983; 1986) suggested that all athletes have their own internal performance climate (ideal performance state) that they need to identify and control to achieve peak performance. In the past, athletes who have successfully gained control over their ideal performance states through the necessary mental skills have done so through trial and error (Loehr, 1983; 1986). Assisting athletes to gain the necessary mental skills to consistently reach their ideal performance states is vital to enhancing

athletes' performance. Gould, Eklund and Jackson (1993) examined differences between wrestlers who won medals and those who did not. They found that successful wrestlers had more effective coping skills at the 1988 Olympics. In particular, the study highlighted the benefits of regularly practising and internalising coping strategies. The results revealed that successful athletes had practised and internalised their coping strategies more than the unsuccessful athletes.

More recent research (Pensgaard & Duda, 2003) found also that perceived coping effectiveness is an important factor, which influences both subjective and objective competitive results. Specifically, Pensgaard and Duda (2003) examined the influence of emotions on the coping strategies and perceived coping effectiveness of 61 athletes at the Sydney 2000 Olympics. The study revealed the importance of athletes learning how to cope with stressful situations effectively. It suggested that, to foster coping effectiveness, training sessions should regularly simulate real competitions to 'stress' athletes and to teach them how to deal with possible distractions and stressors of 'real life' sporting situations. Through regular practice, coping strategies should become more internalised and automatic.

As illustrated within the literature, being in a state of flow requires an athlete to be totally immersed and effortlessly focused on the task and functioning is automatic. In contrast, to handle stressful situations, coping behaviours/strategies often require conscious effort by an individual, especially if they are not well practised or internalised. Nonetheless, such efforts to cope, or coping cognitions, are by nature 'purposeful actions' that may not be related to the task and potentially could disrupt the flow state. It could be more that an athlete's ability to cope with a stressful situation that influences whether he/she can recover and regain a flow state to achieve peak performance. Undoubtedly, coping skills play a crucial role in achieving flow and peak performance. Previous research has found that non-optimal environmental and situation conditions were salient factors in disrupting flow (Jackson, 1992). The ability to learn and apply mental skills such as coping strategies is a vital aspect of coping and reaching peak or optimal performance. In addition, practising mental skills is essential to avoid the detrimental effects on performance that could occur from using skills that are not well practised or are unfamiliar (Weinberg & Williams, 1998).

Mental Skills Training Programmes

Mental skills training(also referred to as Psychological skills training (PST)) (MST) is a practical approach "designed to teach or enhance mental skills that facilitate performance and a positive approach to sport competition" (Vealey, 1994, p.495). As previously stated, many athletes feel that had they been taught the mental skills, rather than having to learn them the hard way, they could have performed at an even higher level earlier in their career (Orlick & Partington, 1988).

As Rushall (1989) states:

"Psychology is the key to athletic excellence" (p. 165).

Mental Toughness. While working with world-class athletes, Bull, Albinson and Shambrook (1996) revealed six related attributes they believe mentally tough athletes possess. Specifically, these attributes include: having a strong desire to succeed; staying positive while under pressure or when challenged; ability to control the controllables; having high commitment with a balanced attitude; having a real sense (high level) of self-belief; and portraying positive body language.

Personality Characteristics and Mental Skills

It is proposed that personality characteristics greatly influence mental skills and particularly those relevant to coping (Hardy et al., 1996; Mellalieu, Hanton & Jones, 2003). In particular, two personality characteristics are theorised to affect stress, coping and sport performance, namely, anxiety and confidence. Indeed, how an individual appraises a stressful situation and copes with it depends significantly on that individual's personality and the available resources in that situation (Carver, Scheier & Weintraub, 1989; Hardy et al., 1996).

Competitive Anxiety. To understand the stress process, an awareness of the relationship between stress and anxiety is essential. As previously stated, the terms *anxiety* and *stress* have been used interchangeably. Indeed, anxiety can be a possible side-effect of the stress process. However, it relates to the affect or feelings experienced

when under stress. In contrast, stress refers to an individual's cognitive appraisal of the situation or stressor. Weinberg and Gould (1995) defined anxiety as "a negative emotional state with feelings of nervousness, worry and apprehension associated with activation or arousal of the body" (p. 93). The more important and uncertain is an event, the more likely it is that an athlete will experience anxiety (Martens, 1977). High levels of anxiety may result in an inability to perform optimally (Burton, 1988; Martens, Vealey & Burton, 1990).

Considerable interest has been shown in regard to the influence of competitive anxiety in sport performance. The Multidimensional Anxiety Model proposes that anxiety comprises cognitive (worry) and somatic (emotionality) components, which influence how individuals respond to stressors in the environment (Martens et al., 1990). A multidimensional approach allows the distinction between the different relationships cognitive and somatic anxiety have on performance (White & Zellner, 1996). As stated, cognitive anxiety represents negative concerns about performance (worry, disrupted attention and an inability to concentrate), whereas somatic anxiety represents perceptions of bodily symptoms like butterflies in the stomach (Martens et al., 1990).

The Sport Anxiety Scale (SAS) is a sport-specific multidimensional measure of trait anxiety and considers the somatic reactions and cognitive concentration disruption of athletes (Smith, Smoll & Schutz, 1990). Such a differentiation is important, as previous research has supported the view that cognitive and somatic anxiety have different antecedents, and different effects on performance (Edwards & Hardy, 1996; Gould, Petlichkoff & Weinberg, 1984; Jones, Swain & Cale, 1990; Martens et al., 1990).

In addition, Jones (1995), based on previous work by Carver and Scheier (1986, 1988), developed a conceptual model that proposed that the interpretation of anxiety symptoms influences other factors such as the use of different coping strategies. Jones (1991, 1995) wrote that both the intensity and direction of anxiety symptoms are critical factors in regard to multidimensional anxiety in sport. Specifically, *intensity* of anxiety refers to the severity (or level) of anxiety symptoms experienced, whereas *direction* of anxiety relates to an individual's interpretation of the intensity of their symptoms, such as whether it is viewed as debilitative or facilitative. Determining the direction of cognitive and somatic anxiety is important, as it relates directly to coping. In particular,

if an athlete perceives cognitive and somatic anxiety to have a positive effect and believe it enhances performance, it eliminates the possible negative effects of anxiety and they cope effectively. In addition, Eubank, Collins and Smith (2000) supported the importance of anxiety direction when they explored its influence on processing bias. Results revealed that anxiety direction, rather than anxiety intensity, is a better predictor of processing bias.

While researchers have previously focused on measuring the intensity of cognitive and somatic anxiety, contemporary research is beginning to consider directional perceptions of cognitive and somatic anxiety, both trait and state of athletes (Hanton & Jones, 1999a; 1999b; Hardy & Parfitt, 1991; Jones & Swain, 1995; Jones, Swain & Hardy, 1993; Ntoumanis & Biddle, 2000). Jones and Swain (1995) found no significant differences between elite and non-elite athletes in the intensity of cognitive and somatic trait anxiety experience. However, it was noted that the elite athletes indicated that symptoms were more facilitative towards their performance.

Ntoumanis and Biddle (2000) found similar results in sport to findings in psychology (Raffety, Smith and Ptacek, 1997), where results revealed that perceptions of facilitative cognitive anxiety are related to the use of problem-focused coping. In addition, high levels of cognitive anxiety intensity related to emotion-focused coping and avoidance coping. With somatic anxiety, results displayed a significant interaction between intensity and direction, where high levels of anxiety intensity related to different coping strategies, depending on whether such somatic anxiety was perceived to be facilitative or debilitative. Such findings have implications for sport psychology. Indeed, practically, athletes who are able to interpret anxiety levels positively are able to use coping strategies effectively.

Until recently, few studies had explored the mechanism that helps explain how anxiety affects performance. However, research on the way information is processed, and the influence of anxiety, has previously been carried out. Eysenck and Calvo (1992) examined performance outcome/effectiveness and processing efficiency. Results revealed that anxiety had a greater influence on processing efficiency than on performance outcome. Mathews and Milroy (1994) found that, in high-pressure situations, anxious individuals are quicker to detect threatening stimuli than are non-

anxious individuals. Researchers (Eysenck, 1992; Mathews, 1993) have argued that the presence of anxiety can create a bias in cognition. Specifically, those individuals who are high trait-anxious tend to engage in greater processing priority to threat-related stimulus. Eysenck (1992) proposed that the effects of anxiety, such as processing bias, can be seen in changes in attentional and/or memory resources. For example, often athletes who are over-anxious suffer from attentional narrowing, miss performance relevant cues and make poor decisions. In addition, over-anxious athletes can worry about other factors, such as significant others who are watching. A consequence of anxiety is that these individuals are more prone to worry (Eysenck & Calvo, 1992). Such worrying can lead to what Mathews (1993) refers to as 'emotional interference', where anxiety reduces the resources available to process task-relevant cues.

In the sporting context, anxiety is viewed as a complex and variable emotional state rather than a unified emotion. This view may explain individual variation in perceived functionality (e.g., whether an athlete perceives an emotion to enhance or to be detrimental to performance) in similar levels of competition. Anxiety can be perceived as a mixed affective state, where athletes can experience alternating feelings of hope, excitement, anticipation, fear and apprehension, or a state of alertness, interest and readiness (Cerin, 2003). Recent studies on perceived functionality of competitive anxiety (Jones & Hanton, 2001) and on mood and athletic performance (Lane & Terry, 2000) revealed that anxiety patterns were characterised by the presence of a number of emotions or feelings. These included feelings of fear, sadness, guilt, discouragement and self-hostility, and resulted in avoidance and reflective action tendencies (self-focused attention) which may be detrimental to performance. On the other hand, feelings of mild to moderate threat-related affects (fear, enjoyment, excitement or externally-directed anger) resulted in interactive action tendencies (externally-focused attention) and may enhance performance.

From a practical perspective, Hanton and Jones (1999b) stated that it would be more beneficial to use a multimodal psychological skills approach (e.g., using goal setting and self-talk together etc.) to cognitively restructure negative interpretations of anxiety into positive. They believed that restructuring would be more effective than reducing anxiety. In addition, evidence from Eubank et al. (2000) also indicated that

athletes would benefit from cognitively restructuring their interpretations, to facilitate the allocation of processing resources to emotionally positive information. Such cognitive restructuring could be developed through integrated multimodal packages. In addition, Cerin (2003) suggested that, to enhance athletes' pre-competition emotional states, interventions that were able to manage challenge appraisal (e.g., cognitive restructuring) and associated emotions (e.g., emotion induction techniques) could be more effective.

Self-Confidence. In competitive sport athletes must inevitably cope under considerable pressure. Indeed, to succeed at a high level, athletes must believe and be confident that they have the capabilities to meet the demands of the challenge. Self-confidence is viewed as the most crucial mental characteristic influencing performance and is vital to success in sport (Burton, 1988; Loehr, 1986; Vaeley, Hayashi, Garner-Holman & Giacobbi, 1998). Self-confidence is considered to be crucial to competitive performance and evidence suggests that, independent of cognitive anxiety, self-confidence is an important predictor of performance (Martens et al., 1990).

The conceptualisation of sport confidence was proposed by Vealey (1986) and was created to distinguish between general self-confidence and sport-specific self-confidence, and was termed 'sport-confidence'. Sport-confidence is essentially about the belief or degree of certainty individuals have about their ability to be successful in sport. Specifically, Vealey's (1986) conceptualisation of sport-confidence focuses on the athlete's perception of ability, and incorporates both trait and state components. Trait sport-confidence is defined "as the belief or degree of certainty an individual *usually* possesses about their ability to be successful in sport" (Vealey, 1986, p. 223). On the other hand, state sport-confidence is defined "as the degree of certainty an individual possesses *at one particular moment* about their ability to be successful in sport" (Vealey, 1986, p. 223).

As previously stated, beliefs about the capabilities to deal with the challenge of the situation are vital in dynamic, uncertain and high-pressure situations such as sport. Lazarus and Folkman (1984) suggested that beliefs about the ability to deal with situations, like sport-confidence, are integral to the stress and coping process because of

the influence they have on the outcome. Confidence beliefs are constructed from previous experience and determine how individuals' evaluate situations (e.g., perceive as a challenge or a threat). Indeed, individuals are more likely to cope effectively when there is less ambiguity about success (e.g., high sport-confidence) (Lazarus & Folkman, 1984).

Naturally, confidence has a direct relationship with the coping process. For example, Williams and Krane (1992) found that the level of self-confidence related to the types of coping strategies athletes used. In addition, evidence also suggests that self-confidence and cognitive anxiety are closely related (Burton, 1988; Hardy & Jones, 1990; Jones et al., 1993) and inevitably would influence the stress and coping process, and performance.

Self-Confidence, Cognitive Anxiety and Somatic Anxiety

Previous investigations have considered the combined relationship among self-confidence, cognitive anxiety, and somatic anxiety. Because self-confidence and cognitive state anxiety are negatively associated, a number of researchers proposed that self-confidence would mediate or protect against the negative effects of cognitive state anxiety (Burton, 1988; Gould et al., 1983; Hardy & Jones, 1990). In support, Jones et al. (1993) found that self-confidence was positively related to directional perceptions of cognitive and somatic state anxiety (Jones et al., 1993). Results revealed that the direction of cognitive and somatic state anxiety was more highly correlated with self-confidence than the intensity of cognitive and somatic state anxiety. Hardy's (1996) results revealed that the addition of self-confidence accounted for an increased proportion of variance in the catastrophe model of arousal and performance. Specifically, Hardy (1996) concluded that self-confidence may moderate the effect of physiological arousal and cognitive anxiety on performance. Wiggin and Brustad (1996) also found that athletes with higher self-confidence perceived cognitive and somatic anxiety as more facilitative to their performance.

Previous research clearly demonstrates that personality characteristics such as self-confidence, cognitive anxiety and somatic anxiety can influence sport performance.

All three need to be considered when examining coping, particularly in relation to the perception of stressors (Hardy et al., 1996). All three independent factors have been shown to influence whether athletes perceive a situation as a threat, stressful or a challenge (Hardy & Jones, 1990; Jones & Swain, 1995; Stone & Neale, 1984).

Cognitive Restructuring

Conroy and Benjamin (2001) infer that, often, applied sport psychology consultations do not address the underlying issue(s) that cause performance problems and focus instead on psychological skills for performance enhancement only. It is important that applied sport psychologist also ensure that they are preventing further performance issues arising by addressing and dealing with the root of the problem. Myers, Whelan & Murphy (1996) revealed that interventions with specific cognitive-restructuring components more effective than PST interventions without such components. In addition, it is useful for athletes to gain insight into their performances and themselves because self-exploration is valuable skill.

Three way's psychological aspects influence human functioning, namely, thoughts, feelings and behaviours. The three are related, in that, a change in one often causes a change in the others. For example, if an individual changes the way he/she thinks about a situation, it will alter the feelings about that event and can effect a change in behaviour. Rational Emotive Therapy (RET) concentrates on the cognitive-emotive interfaces, which conceptually deals with the causes of human emotions (Walen, DiGiuseppe & Dryden, 1992). There are six fundamental principles in the theory of RET: (a) cognition is the most important determinant of human emotion (i.e., we feel what we think); (b) dysfunctional thinking (e.g., irrational thinking, illogic, exaggeration) is a primary determinant of emotional distress; (c) the best way to relieve and/or prevent distress is to change dysfunctional thinking; (d) multiple factors influence irrational thinking and psychopathology, such as genetic (predispositions to think irrationally) and environmental influences (learned irrational beliefs); (e) RET focuses on the present and considers irrational beliefs to be central to emotional distress; (f)

beliefs can be changed. Irrational thoughts can be changed by recognising, continually challenging and revising such thinking.

Mental Skills Training Interventions

Design: Single-Case Research Designs. To assist in the assessment of psychological skills training (PST) programmes, it is essential to evaluate individual responses to such programmes or interventions. Not only will such evaluations enhance the development and effectiveness of such programmes but it will also promote the importance and value of sport psychology as a sub-discipline. It is surprising that, despite the recognition by coaches and athletes of psychological skills training benefits (Ravizza, 1988), that the use of such training has not been universally adopted nor always successful when used across sports (Blinde & Tierney, 1990). Hence, there is a need for more evaluative research on individual responses to PST.

Single-case designs have provided valuable information and been successful in other sport research domains (Hanton & Jones, 1999b; Hrycaiko & Martin, 1996). Shambrook and Bull (1996) supported the use of single-case research designs examining individual differences when studying the efficacy of imagery training. Specifically, the study showed that single-case research provided a sound framework upon which to assess psychological skills training programmes/interventions. However, they suggested caution was needed to ensure that such methodologies are employed correctly to avoid misleading findings. Single-case designs must choose analysis techniques which isolate each component of the programme/intervention. The effectiveness of the intervention is paramount if the athlete is to optimise the opportunity to reach peak performance. If delivery and/or evaluation is not sound it could unnecessarily change positive components or fail to alter components that are not working.

Implementation. Frey, Laguna and Ravizza (2003) have stressed the importance for researchers, consultants, coaches and the athletes themselves to recognise the value of the practice environment. They highlighted the neglect of mental skills during practice, with athletes only using sport practices occasionally to enhance their

mental skills. Generally, athletes spend much time practising the physical and technical skill components of the sport. Committed athletes spend 99% of their time in practice as opposed to competition (McCann, 1995). Frey et al. (1993) suggested that sport psychology consultants need to accentuate benefits of quality practice to both athletes and coaches, and provide more assistance in incorporating such skills into both practices and competitions.

Specifically, Frey et al. (2003) found that collegiate baseball and softball players significantly used mental skills in competition to a greater extent than in practice. In addition, players had significantly higher perceptions of success in practice and competition when players reported a greater use of mental skills in both environments. Although, the success of the mental skills used was not examine, it was found that players' experiences with mental skills had no significant effect on their use of mental skills during practice and competition.

The literature supports integrating mental skills into practice to enhance athletes' competitive success (Barr & Hall, 1992; Vealey & Greenleaf, 1998; Wienberg & Comar, 1994). Weinberg and Williams (1998) found that athletes are more likely to transfer mental skills into competition when they are incorporated into practices. Specifically, they found that those athletes who displayed poor mental performance (e.g., unable to concentrate) in practice also did so in competitions.

Evaluation. The need for systematic evaluation of MSTP has been a problematic issue in applied sport psychology. Sport psychologist need to demonstrate the effectiveness of intervention (Beckmann & Kellmann, 2003; Hardy & Jones, 1990). Most MSTP evaluation has utilised self-report measures, which have been a controversial evaluator because athletes might not express accurately what they do. To overcome the weaknesses of self-report measures and enhance executive coaching feedback, the corporate sector developed a 360° feedback methodology. According to Judge and Cowell (1997, executive coaches use this method to provide effective feedback for their clients. Research has shown that 360° feedback successfully promotes increased self-awareness of skill strengths and deficiencies in the corporate setting (Hagberg, 1996; Shipper & Dillard, 2000). Thach (2002) supported the use of 360°

feedback in developing and honing the skills of, and preventing the derailing effects of, poor performance in executives.

Comment [UU3]: my words. Something was missing?

When using behavioural interventions, it is essential to determine whether the changes are both important and appropriate. More practically, do the participants see the intervention as worthwhile and maybe even more importantly, will these changes make a difference to their ability to cope? In addition, are these interventions important and transferable the other athletes. Social validation is one way of evaluating whether behaviour change has applied significance (Anderson, Miles, Mahoney & Robinson, 2002; Kazdin, 1982).

Summary

Stress has been defined as "a (perceived) substantial imbalance between the demand and response capability, under conditions where failure to meet that demand has important consequences (perceived)" (McGrath, 1970, p. 20). Competitive sports such as hockey provide an abundance of situations that could be potentially stressful. The literature emphasises the importance of understanding the sources of stress salient to athletes, in order to enhance performance, create positive sporting experiences and reduce the adverse effects of stress.

In general, coping is the way athletes attempt to deal with the situational demands and/or stressful situations of competitive sport. Crocker (1992) viewed coping as the process of attempting to manage stressful situations through cognitive and behavioural actions. Stress is integral to the coping process (Lazarus & Folkman, 1984) and if not managed effectively it can have a detrimental effect on athletes' sporting experiences and performance (Anshel et al., 1997; Orlick & Partington; 1988). Researchers have identified a variety of sources of stress, and different coping strategies used by athletes for it to be managed. Such research has revealed similarities in sources of stress across sports, but sport-specific research is needed in a variety of settings, including team sports (James & Collins, 1997; Noblet & Gifford, 2002). The increasing demands that sport places on modern day athletes can potentially incur considerable

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stress. If it is not managed effectively, it can adversely effect athletes' experiences and performances, thereby the importance of learning coping skills.

In general, the majority of research has been descriptive with several authors indicating the need for further clarity (Aimot, Gaudreau & Blanchard, 2004; Hardy et al., 1996; Nicholls, Holt & Polman, 2005). Specifically, further research is needed to examine coping in more depth. Only then can one identify the psychological characteristics of people who cope effectively, investigate the factors that influence coping in a variety of settings, understand how coping is developed, and evaluate whether coping skills can be taught effectively.

Previously, very little research had been applied to help athletes cope more effectively. In particular, the literature illustrates a clear need for evaluative research on mental skills training programmes/interventions, where such evaluations will further enhance the development and effectiveness of MST programmes.

Significance and Implications of this Study

Despite some research having examined the concept of coping, little research has been applied to help athletes cope more effectively. Coping with stress is a critical factor in achieving sporting success. Athletes have expressed the feeling that if they had been taught coping skills, rather than having to learn them through chance of experience, or trial and error, they believed they could have achieved greater sporting success earlier in their careers.

Such statements indicate a potential need for MST programmes/interventions to be developed, implemented and evaluated. The recognition that mental and emotional processes enhance sport performance demonstrates a need for MST programmes to become an integral part of the elite athlete's training.

Previously authors have proposed that coping studies should explore how individuals actually deal with specific situations. Sources of stress in team sports (Noblet & Gifford, 2002) have included an understanding of situation-specific stressors. From a practical viewpoint, understanding the sources of stress that are unique to a specific situation has important implications for PST programmes/interventions.

As outlined above, field hockey is a complex and demanding sport. Team sports such as hockey are demanding in terms of practice demands and competent across a range of technical skills.

By examining the experiences of competitive hockey players, this study set out to understand the variables that mediate the relationship between mental preparation, coping and performance. For optimal performance in hockey, players need to maintain an optimal mental state throughout competition in order to cope, especially at the elite level. Therefore, it was important to examine the coping strategies of elite players to ascertain the coping skills they use for a consistent, optimal performance. Furthermore, by documenting these findings, coping strategies can be passed on to other athletes. Previous studies have shown that valuable knowledge can be gained from athletes who excel in their sport (Dugdale, 1996; Orlick, 1989).

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Applied psychologists regularly have tried to describe, explain and control coping behaviours because of its influence on performance (Giacobbi & Weinberg, 2000). To assist in enhancing coping, an examination of coping strategies and MST programmes, and evaluation of individual responses to such programmes/ interventions was essential. Not only would such evaluations enhance the development and effectiveness of PST programmes, but they would also promote the importance and value of sport psychology. To explore the issues central to PST, much can be learnt from both players and coaches who are directly involved in the sport (Orlick & Partington, 1988).

This study sought to assist New Zealand female elite hockey players with coping. In addition, the study aims to provide valid practical recommendations and a Mental Skills Training Programme (MSTP) package appropriate for female elite hockey players and coaches.

The study was grounded in a triangulation approach to thoroughly investigate the issues central to coping in hockey. In addition, the study examined the conceptual relevance of the influence of situation and dispositional factors on coping with competitive stress.

Research Questions

The study was divided into three parts. Specifically, this study will explore and examine the following issues, which have been identified by previous literature as important in coping in competitive sport:

A. Design

1. Identify:
   - What stressful situations and/or challenges are experienced by athletes during major hockey competitions.
   - How players react to stressful situations and challenges.
   - The types or combinations of coping strategies used by athletes.
2. Explore: Individual differences in the stability and variability of coping.
   - Investigate the differences in coping strategies used across various stressful situations.
   - Investigate performance of players who cope effectively in comparison with those who are ineffective at coping.
3. Examine: The relationship between coping strategy effectiveness, automaticity and performance.

B. Implementation

1. A coping Mental Skills Training Programme (Coping MSTP) was implemented. This intervention will be grounded in the findings from the first part of the study.

C. Evaluation

1. Investigate: The effectiveness of the Coping MSTP.
   - Evaluation of the components of the Coping MSTP.
   - Identify whether coping skills can be taught to enhance effective coping.

2. Identify: What recommendations and Mental Skills Training techniques can be offered to help develop coping strategies in female field hockey players.

CHAPTER THREE

Methods and Procedures

The first two parts of this study served as a reflective discovery process, in which the researcher explored the issues central to coping in female elite hockey players in New Zealand. Both qualitative and quantitative methods were used in this study via a triangulation approach to build on previous findings. Thus, a comprehensive understanding of the coping issues pertinent to elite female hockey players was provided. Using the knowledge gained in the first two parts of the study, the third part was designed to provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) package for female hockey players and coaches. This chapter is divided into three parts. The first part outlines the initial pilot study, the second outlines the quantitative and qualitative research methods used, and the final part outlines the applied research/intervention methods used.

The methods in this study are based on previous research (Conroy & Benjamin, 2001; Cresswell, 1999; Dugdale, Eklund & Gordon, 2002; Fletcher & Hanton, 2003; Frey, Laguna & Ravizza, 2003; Kim & Duda, 2003; Neumann, 1996; Park, 2000; Weinberg & Giacobbi, 2000).

Part One: Pilot Study

The pilot study explored the concept of coping within elite hockey and provided a greater understanding of this issue. Initial interviews were conducted with purposefully selected individuals. Specifically, the interviews sought feedback about coping needs and the types of stressors experienced in hockey from those the study was designed to assist. In addition, this procedure allowed the subjects to express any areas of concern with the study and to suggest modifications.

The pilot study also provided valuable insight into defining the subsequent Coping MSTP. In addition, the initial findings directly helped the researcher in designing the quantitative research, by defining what important issues needed to be addressed in the questionnaire.

Qualitative Research

Qualitative data is instrumental to social science, with more researchers in applied fields shifting to the use of words rather than numbers. A qualitative paradigm helps one to understand what a person is thinking or feeling. Such an approach is directly beneficial to the present research, which examined cognitive strategies that are not directly observable.

Qualitative research allows the study to be unrestricted. Patton (1990) suggested that using an inductive, naturalistic inquiry approach without predetermined hypotheses is an important strength of such research. Rather, the present qualitative research is guided by questions and issues that search for new information. In addition to searching for new information not explored before, this procedure allows consumers to express any areas of concern with the study and to suggest modifications. In particular, the interviews collected valuable feedback regarding coping needs and the types of stressors experienced in elite female hockey players.

A number of assumptions are made in the present qualitative research. One is that the participants are able to rationalise and communicate their ideas fully to identify the stressors they experience, and to communicate the strategies they use to cope with such stressors. Another assumption is that the researcher is the ‘measuring instrument’. Therefore, the credibility of the researcher is integral to the study. To ensure the trustworthiness of the researcher in this study, and to establish their credibility, background was provided on their prior experience, qualifications and perspectives.

Sampling

Sample Size. Qualitative researchers usually have small samples of participants, associated with the context of the project and studied in depth (Miles & Huberman, 1994). There are no definite rules to the sample size used in a study (Lincoln & Guba, 1985; Miles & Huberman, 1994; Patton, 1987, 1990). However, the number of participants used in this study was determined by the purpose of the qualitative research. Although a sample size should be large enough to provide credibility, the main defining

factor relates more to the depth than the breadth (Patton, 1987). Therefore, samples must be small enough to allow rich, detailed, in-depth information to be gained. The sample size of nine for this study was perceived as was perceived as manageable within the time limitations and sufficient to gain adequate detailed information regarding the specific coping needs and types of stressors experienced within elite female hockey.

Participants

Initial interviews were conducted with purposefully selected individuals associated with elite hockey to provide greater understanding of the pertinent coping issues pertinent to hockey; and would ensure that the findings were comprehensive, informative and rich in detail.

Specifically, nine participants (players = 5, coaches = 2, administrators = 2) were interviewed using a standardised open-ended approach. All participants were purposefully selected by the Administration Manager of Hockey New Zealand and were involved in Hockey at an elite level. Specifically, the players were all members of the current New Zealand women's hockey team. Five players were interviewed in the initial pilot study, as the researcher wanted to obtain a cross-section of players' experiences. Two of the five players had only played 15 or fewer games for New Zealand, while the other players had all played over 60 games for New Zealand. The two most experienced players had been playing for approximately 10 years, and were considering retirement in the near future. The third of the experienced players was relatively young at age 26, but, as the captain of the New Zealand team, had a good overall understanding of the team. This player envisaged playing international hockey for the next five years as she had a number of goals still to achieve within the sport.

This study of elite hockey personnel was viewed as an extremely rich source of information to provide depth to the findings. In addition, the study was broadened to include experienced, coaches and administrators to provide an outsiders' objective opinion on players' experiences and capture issues that players might not notice or comprehend.

All participants had been involved in hockey at either a national or international level between 8 and 37 years. The two coaches had coached at New Zealand age-group level for a number of years and had recently provided assistance at New Zealand senior level. In addition, both administrative participants were currently involved at the operational level of both national and international hockey in New Zealand.

Generalisability

Because of the qualitative research design, the analysis limits the findings to the sample being studied. Also, because participants in this qualitative part of the study were purposefully selected the interview findings cannot be generalised to other elite hockey players. The purpose of this pilot study was for the researcher to gain an in-depth knowledge of the coping needs and the types of stressors elite female hockey players encountered in specific situations.

Procedures

Initial Contact. The participants purposefully selected to take part in the pilot interviews were contacted by phone and asked to participate in a face-to-face interview. They were informed of further details required for the interview, such as the time involved, confidentiality, and member checking (refer to the section 'Member Checking'). It was clearly stated that participation in the interview was voluntary and that the participants could withdraw from the study at any time without prejudice.

Interviews. The single interview with each participant followed a standardised open-ended approach. The interview was conducted at the participant's home or a place agreed by both parties. Participants were provided with an information sheet (Appendix D) and a consent form (Appendix F). The interview was conducted using an 'interview schedule' (refer to Appendix E) that specified, prior to the interview, the standardised open-ended approach the interviewer would follow.

Although an interview schedule pre-determines the focus of an interview, it still allows the participants' perspectives about coping within elite hockey to be thoughtfully investigated. When other areas of interest presented themselves during the interview,

probing questions were used to explore these issues further.

In addition, the use of an interview guide enhances the credibility of the findings by ensuring that the same questions, in similar depth, are asked of all participants and minimises variation. Miles and Huberman (1994) also imply that although, there is merit in open-mindedness, on going into research looking for questions as well as answers, they also agreed with Wolcott (1982, cited in Miles and Huberman, 1994), that "it is impossible to embark upon research without some idea of what one is looking for and foolish not to make that quest explicit" (p. 157). Tighter designs are wise, and provide clarity and focus in research in which overload could be an issue.

Data Analysis

Initial transcribing of the interviews verbatim allowed the researcher to become familiar with the raw data. The raw data were then content analysed following the procedures outlined by Miles and Huberman (1994) and Patton (1990). The verbatim interviews were transcribed and the content analyses used to determine patterns or themes of coping strategies. Participants' responses were segregated into meaningful units, which were then organised into categories using inductive procedures (Scanlan, Stein & Ravizza, 1991). These procedures build on themselves, in a manner similar to factor analysis with like 'meaning units' grouped together in themes. Higher-order themes (general dimensions) were formed from similar lower-order themes. In addition, deductive analysis was used to test themes and patterns from inductive analysis.

A delimiting criterion was used to guide the study, which primarily focused on inductive analysis. Within this criterion, each individual theme was inclusive and included all those of lower-order. In addition, all themes on a level were mutually exclusive, thereby leaving as few as possible ungrouped. Lastly, higher-order themes tried to capture most of those within a lower level to leave as few ungrouped as possible (Patton, 1990). Furthermore, transcripts were re-read to verify themes and dimensions represented, and to increase credibility of the study. Peer briefing and member checking procedures were also performed, and an audit trail was used to confirm the results (refer to later sections).

Case and Cross-case Analysis

The data were presented using a mixture of case and cross-case analyses. Specifically, information from the interview that related directly to a specific individual, and that was not comparable to other participants, was presented as separate cases. Information that related to sources of stress and coping strategies generally, and that was comparable, was presented in cross-case form. Contrasting the stressors and strategies helps the researcher make recommendations for developing mental skills to deal with such stressors. In addition, this analysis could also demonstrate how participants choose coping strategies, and their effectiveness and automaticity in their applications.

Trustworthiness

It is given that how individuals view the world differs among individuals. Therefore, as the 'measuring instrument' it was acknowledged that the researcher brought her own particular perspectives to the study. Such perspectives were developed through both her education in sport psychology, and her involvement and experiences within elite hockey. Specifically, the researcher had been involved in competitive hockey for 16 years, reaching senior provincial level. The researcher had completed a Bachelor of Physical Education with Honours in Sport Psychology and had taken papers in research methods and design. In addition, the researcher was familiar with general coping theories and qualitative research.

The trustworthiness of the study is enhanced when a researcher has taken into consideration issues to ensure the results are credible, transferable, dependable and confirmable (Lincoln & Guba, 1985; Miles & Huberman, 1994; Patton, 1990). Therefore, the researcher in this study carefully considered the above issues to ensure that the results were worthy of attention.

Credibility To enhance the credibility of the present study, both peer debriefing and member checking techniques were used.

Peer debriefing. Peer debriefing was used to explore methodological issues, recognise study biases, clarify interpretations and provide a 'devil's advocate' (Lincoln & Guba, 1985; Miles & Huberman, 1994). Such techniques help analyse the study or inquiry and expose those aspects that are implicit to the researcher or inquirer's mind. Lincoln & Guba (1985) suggest that the disinterested peer should be an individual who has knowledge of methodological issues and of the topic, but who is not involved in the study. The peer debriefer for this study was a fellow colleague who is employed in the sport and exercise science sector and who has undertaken postgraduate courses in qualitative research paradigms and research methods and design. Consistent with Lincoln & Guba's (1985) suggestion, the peer debriefer was experienced in qualitative study through a Master of Science in Sport and Exercise Science, and was otherwise not involved in the study.

Member checking. To further enhance credibility, member checking also was used. This involves the confirmation of transcript records and interpretations with the participants involved in the study (Miles and Huberman, 1994). Lincoln and Guba (1985) stated that member (or participant) checking is one of the most important techniques in establishing credibility. When the researcher receives agreement from participants, it strongly assists in "convincing the readers and critics of the authenticity of the work" (Lincoln & Guba, 1985). To ensure that interpretations of the participants' comments during the interviews were correct, the researcher checked their understanding by paraphrasing their responses back to them for confirmation. In addition, following the interviews, transcript and interpretation reports were sent back to the participants for comment on the accuracy of the information. Specifically, participants were asked to confirm the accuracy or to modify any inaccurate reports. The participants all confirmed that the information provided to them was an accurate reflection of their experiences in hockey, and generally believed that the information was correct.

Transferability

Thick Description. The purpose of thick description is to provide enough information about the context and conditions of the study to allow transferability and make interpretations possible (Miles & Huberman, 1994; Patton, 1990). Thick descriptions assist by providing a detailed account of the data collection and analysis procedures. Newman (1992) believes that transferability exists if the participants' perceptions are reported vividly enough to have meaning. Therefore, sufficient information and direct quotations were included within this study to allow the reader to understanding the both the situation and the thoughts of the participant (Patton, 1990).

Dependability/Confirmability:

Audit Trail. To establish the dependability and confirmability of the results, an auditor checked the logic and readability of the qualitative results to ensure that the interpretations, discussions and conclusions were valid representations of the interviews (Lincoln & Guba, 1985). Specifically, the auditor, who was not involved in the study, analyses random samples of the raw data to check that interpretations and overall conclusions drawn from the study are acceptable. The auditor for this study was a graduate student at the University of Otago School of Physical Education. He had undertaken post-graduate courses in qualitative research paradigms, and research methods and design during a Masters degree in Physical Education.

Reflective Journal. A reflective journal was kept during the study, whereby the researcher kept information about both the qualitative and quantitative methodology. This journal served as a record of the research schedule, methodological issues, personal observations, decisions regarding the study and a rationale. This process also assisted the auditor in assessing the dependability and confirmability of the study.

Part Two: Quantitative and Qualitative Research

This section is divided into two parts: the first part outlines the quantitative methods used and the second outlines the qualitative method used. Data triangulation was utilised in this study to enhance both the width and depth of information collected.

Quantitative Methods

Participants

All athletes (N=174) in the 13 provincial teams (12 associations) competing in the National Field Hockey Championships on 24-29 September were invited to take part in the study. The criteria for inclusion in this study were:

– female
– currently competing in the National Field Hockey Championships
– over the age of 18

Each participant completed an informed consent form prior to the collection of data (see Appendix F).

Administering the Questionnaires

Permission to conduct the study was obtained from Hockey New Zealand (refer to Appendix B) via a letter inviting them to participate (refer to Appendix A). The methods and procedures used were based on a review of relevant literature on coping issues, and feedback received from Hockey New Zealand administrators, coaches and athletes (Part One: Pilot Study).

Questionnaire

All participants completed a questionnaire that included demographic items and other psychometric scales.

Demographics. The demographic items obtained information on the participants: contact details, team, playing position, years of competitive field hockey experience and representative achievements. All of these variables were shown to influence coping strategies, anxiety and stress (Madden et al., 1990).

Stressful Experiences. Through open-ended questions, the participants were asked to identify and describe the stressful situations and/or challenges they had experienced during their involvement in competitive provincial hockey. In addition, participants indicated whether such stressors affected their performance and how, and which events had been "expected" or "unexpected". If the stressors had been expected by any of the participants, they were asked to describe how they and/or their team had prepared for such stressors.

COPE. The COPE developed by Carver et al. (1989) was used to assess the coping strategies used by participants, and consisted of 13 original subscales. Two subscales (Religion and Alcohol/Drug Use) were removed, as they were not perceived as relevant to the study. Each of the 13 subscales consisted of four items and is scored on a 5-point Likert scale (Not Used at All [1] to Used Very Much [5]). Internal consistency for all subscales of the COPE (mean $\alpha = 0.73$, $\propto$ range 0.63 - 0.92), except the Mental Disengagement subscale, has been reported by Eklund, Grove and Heard (1998). Pensgaard & Duda (2003) found Cronbach alpha values were satisfactory for nine of the subscales of the COPE. It should be noted that while they acknowledged Nunnally's (1978) recommendations they argued that, when there are a limited number of items in a subscale, lower alphas should be accepted. Therefore, they kept nine subscales and eliminated the four subscales with a reliability of less than 0.60 from subsequent analysis.

Automaticity. Coping automaticity was measured by the three items used in previous research (Dugdale, 2002; Finch, 1993) to assess automaticity. The statement stem of "In general during competitive stressful experiences" and

participants' responses were indicated on a 9-point bi-polar response scale (i.e., "My coping required effort – My coping was automatic", "I made a deliberate effort to cope – I made no conscious effort to cope", "I thought a great deal about my coping strategies – I didn't have to think about my coping strategies'"). Dugdale, Eklund and Gordon (2003) observed that internal consistency of these items was adequate (α = 0.76; item-total correlations from 0.47 to 0.68).

Coping Effectiveness. Coping effectiveness was measured by the one item that Dugdale, Eklund and Gordon (2002) had used to assess the effectiveness of coping strategies. Athletes rated the perceived effectiveness of the coping strategies they usually used to cope with stressful experiences, by using an 11-point Likert scale (0% effective [0] to 100% effective [10]).

The Sport Anxiety Scale (SAS). The Sport Anxiety Scale (SAS) was developed by Smith, Smoll and Schutz (1990) to assess both the cognitive and somatic indices of trait anxiety. It consists of 21 items, which contain three subscales rated on a 4-point Likert scale as follows: Not at All (1), Somewhat (2), Moderately (3), and Very Much So (4). The scale has shown acceptable internal reliability with Cronbach's Alpha Coefficient of 0.88 for Somatic Anxiety, 0.82 for Worry and 0.74 for Concentration disruption (Smith et al., 1990).

The Sources of Stress Scale (SSS). The Sources of Stress Scale (SSS) was developed by Gould, Horn and Spreemann, (1983) to assess perceived sources of stress in wrestlers. Participants respond to 33 items on a 7-point Likert scale, ranging from 'Always' (1) to 'Never' (7). The scale has a reported test-retest reliability coefficient of 0.74 for all items combined (Gould et al., 1983). Several questions relating specifically to field hockey will be added to the SSS. Before administering the questionnaire, these eight extra questions were examined for face validity.

All 12 hockey associations with teams attending the National Women's Hockey Championships were sent a cover letter (refer to Appendix H) and information sheet (refer to Appendix I) explaining the nature of the study. Extra copies of the information

sheet were provided and distributed to the members of each team in participant information packs. During the tournament, each team met individually with the researcher at scheduled times (chosen at the convenience of the teams). Such meetings occurred in a designated room at the stadium, where participants from the team were given specific instructions and plenty of time to complete the questionnaire (refer to Appendix G). Each participant was provided with an information pack which included information sheets (refer to Appendix I), informed consent forms (refer to Appendix F) and the questionnaire (refer to Appendix G).

Data Analysis

A preliminary MANOVA was performed to establish whether differences relating to age, experience or independent variables existed in this study. If differences were found, participants would then be grouped separately for further analysis.

Internal reliability of the questionnaire subscales was assessed by calculating total scale Cronbach's Alpha Coefficient. Factor analysis was carried out to identify coping strategies and sources of stress. To determine the effect and significance that dependent variables have on participants, multiple regression analysis was used. Relationships between significant variables were determined using simple Pearson's correlation and stepwise regression.

Qualitative Methodology

For more in-depth information on qualitative methodology, refer to the sections already covered on qualitative research, sampling, generalisability, data analysis, cross-case and case analysis, and trustworthiness.

Participants

A purposeful sample of participants was interviewed from among those who completed the questionnaire. Using purposeful sampling helped ensure that the participants included were best suited to answer the research questions (Lincoln & Guba, 1985; Miles & Huberman, 1994; Patton, 1987; 1990). The researcher chose participants who exhibited either a low or high level of coping strategies when compared with the other participants. These participants were identified appropriately to answer the research questions for the current study.

Specifically, two participants, one from the highest and lowest scores on the effective coping item were chosen. These participants were also chosen so they were equivalent in experience. It is assumed that, by nature, those athletes who are able to cope more effectively are able to reach a higher level of competition than those who are unable to cope. Therefore, 'experience' in this study was defined more as years of competitive playing rather than as achievements.

The two participants who displayed the least and the most coping effectiveness were identified but, due to a noticeable difference between the experience of these two participants, another participant who displayed poor coping effectiveness was chosen as well. This additional participant was also comparable to the participant who displayed the most effectiveness in relation to experience, and accounted for any variance due to experience. No other participants were interviewed, due to the limitations of the study. Further information on the participants is presented in individual case studies in the results section.

Procedure

Participants were made aware, via the information sheet and by the researcher, that when they consented to complete the questionnaire and be part of the study, they might be asked to further participate in a personal interview with the researcher. The participants identified as either high or low copers were contacted by phone and asked to participate in a personal interview. Arrangements were then made to schedule a time

for the interview and to ensure that the participants fully understood the interview procedure.

The interview took place either at the participant's home or at a suitable location agreed upon by both the participant and researcher. All interviews were conducted by the researcher. Before the interview commenced, participants were required to read and fully understand an information sheet (refer to Appendix K), and to complete a consent form (refer to Appendix F). The interview was a structured open-ended procedure and was based on an 'interview guide' (refer to Appendix J). Probing questions were also used when necessary to elicit further descriptions from participants.

Data Analysis

The interviews were transcribed verbatim and then content-analysed to determine patterns or themes of coping strategies. Participants' responses were segregated into meaning units. Such units were then organised into categories, using inductive procedures (Scanlan, Stein & Ravizza, 1991). Higher order-themes (general dimensions) were formed from similar lower-order themes. In addition, deductive analysis was used to test themes and patterns from inductive analysis. To increase the credibility of the study, peer briefing and member-checking procedures were also performed, and an audit trail was used to confirm the results (refer to more in-depth descriptions of data analysis, cross-case and case analysis, and trustworthiness in Part one: Pilot study).

Part Three: Intervention Programme

A Coping Mental Skills Training Programme (MSTP) was designed and implemented, based on the first two parts of this study. The purpose of part three of the study was to provide valid practical recommendations and a Coping MSTP package for female hockey players and coaches.

To confirm that the recommendations of this study were viable and actually did enhance the coping skills of players, a valid evaluation was conducted. This part of the study utilised methodology based on work by Brewer and Shillinglaw (1992); Bryan (1987); Cacioppe and Albrecht (2000); Hrycaiko and Martin (1996); Roderson and Hrycaiko (2002); Smith (1988); and Thach (2002). The research design utilised a case study approach. The researcher would have preferred to use a 'single-subject multiple baseline across individuals design' to assess performance, but the relative lateness in the season in which the intervention occurred meant that it could not be introduced to the participants at different stages (sequentially). Therefore, all participants were given the intervention at the same time and followed as case studies across the intervention. Baseline data were established prior to commencing the intervention.

The timing of the intervention was determined with the guidance of the Hockey New Zealand Development Officer. A time was chosen that was beneficial to the players and would not put additional pressure on them during their most important games of the season. As most age-group international games are played relatively earlier in the season, players were unavailable at this time. Hence, the intervention was implemented later in the season, rather than pre-season as preferred, after such commitments had been completed. Although the researcher would have preferred to implement the intervention prior to the season, the New Zealand Academy players were unavailable.

Participants

The participants were members of the New Zealand Hockey Academy Squad and were required to be aged 18 and over. Five members of the squad were purposefully

selected by the Hockey New Zealand Development Officer, and were invited to take part in the study. Criteria for inclusion were:

– Female

– A current member of the New Zealand Hockey Academy Squad

– Over the age of 18.

One member of the five selected to participate in the intervention pulled out due to injury in the early stages. All information regarding this case has been omitted, as it was considered irrelevant. No participants had previous experience with sport psychology or MSTPs. Specific case study information is defined below and the names of the participants have been changed to ensure anonymity.

Case One: Jessica. Jessica is a 22-year-old who has recently graduated from university and is in her first year of full-time employment. Although Jessica is enjoying the new challenge of working full time, she misses the flexibility of being a student and is conscious of having to be more structured and organised now, as she no longer has the spare time to just "go hit a ball around for fun". A confident and highly motivated person, Jessica enjoys playing hockey and is aiming for higher honours. Currently, she has played the last three seasons in the elite National Hockey League. Having recently moved provinces for employment, she is adjusting to a new team environment and style of hockey. Although she misses her old team and its environment, she admits that she is adjusting, and believes the move will benefit her game and prepare her for playing at the next level.

Case Two: Mary. Mary is an 18-year-old student who has only recently been selected in the New Zealand Academy team. Being a first-year university student, this is also Mary's first experience living away from home. Identified as an up-and-coming player, Mary shows a lot of natural talent. Though a quietly confident individual, Mary is relatively reserved and, according to the Hockey New Zealand Development Officer, doesn't really push herself enough and would greatly benefit from the programme/intervention. This was Mary's first year of being involved in the National Hockey League as a squad member.

Case Three: Elizabeth. Elizabeth is a 19-year-old student, in the second year of her university study. Identified early in her career as having the potential to represent her country, Elizabeth has already been playing at a high level (National Hockey League) for five seasons. Probably the most talented of the four cases, Elizabeth feels that she needs assistance with some parts of her game. Though she believes that she is not overly confident, her natural ability and achievements thus far show that she has the ability. Elizabeth was very keen to be involved in the programme/intervention and to improve her mental abilities to improve her game.

Case Four: Amanda. The oldest of the four cases, at 24 years old Amanda is also the most experienced, having played in the National Hockey League (NHL) for 6 years. In addition, during her career she has played in two New Zealand Senior Women Trials and recently was named in the New Zealand Senior Women's Squad. Amanda has been identified as a capable and consistent performer at NHL level and, with the recent retirements of some of the more experienced players, is set to establish a place within the New Zealand team in the future. Despite being excited about making the New Zealand Squad and on the fringes of making the team, Amanda has struggled at times this year, having what she described as a "tough" year personally.

Procedures

The five participants from the New Zealand Hockey Academy Squad were sent a cover letter (refer to Appendix L) and information sheet (refer to Appendix M) explaining the nature of the study. Prior to the start of the study, the researcher organised via phone to meet with participants in person to discuss the intervention. In addition, at this point the researcher also asked the participants to designate and, if possible, organise for the coach, significant other, and another player to also meet with the researcher at the same time.

The main purpose for the participants to meet with the researcher was to discuss the details of the intervention. Specifically, a brief introduction to the study, some

personal background on the researcher, and detailed instructions on the procedures of the intervention were discussed. Particular attention was aid to how to complete the pre-, post-, and follow-up Coping Skills Performance Profiles (refer to Appendix R). The researcher stressed to the participants the importance to the success of the intervention of following the instructions as outlined. The utmost importance of ensuring the target dates were met was particularly highlighted.

Coaches, significant others and other players were also provided with background information, detailed instructions on their part in the evaluation of the intervention, and how to complete the pre-, post- and follow-up Coping Skills Performance Profiles (refer to Appendix Q). The researcher stressed to the coaches, significant others and other players the need for target dates to be achieved to ensure the success of the intervention. In addition, these individuals were used in the intervention as both a motivational and support role to help keep the participants on track throughout the intervention.

Prior to discussing the workbooks and distributing the Coping Skills Training Programme package, the initial pre-intervention Coping Skills Performance Profiles were completed by the participants, coaches, significant others, and other players. Once the profiles were completed, the researcher distributed the Coping Skills Training Programme package and discussed the Coping Skills Training Programme workbooks (refer to Appendix N) and worksheets (refer to Appendix O).

Specifically, the package included a brief instruction sheet, the workbook, worksheets, pre-/post-/follow-up performance profiles, social validity questionnaire and self-addressed envelopes. A brief instruction sheet (refer to Appendix O) was also included to outline the key instructions already discussed with the participants, as well as a schedule of the target dates. Self-addressed envelopes were included to help the participants' return completed worksheets, performance profiles and social validity questionnaires to the researcher. The researcher also mentored the participants on how to use the workbook and worksheets, and provided some introductory definitions and information on the mental skills in the workbook. Lastly, the participants were informed that the researcher was available at any time during the intervention (via phone) to help with the techniques or to answer any questions that might arise. Also, researcher phoned

the participants weekly to discuss the intervention.

Instruments

Workbook. The actual content of the Coping MSTP was based on the findings of the first two parts of this study, and previous research and applied work in sport psychology (refer to the references in Appendix N) but adapted to suit the needs of competitive hockey players. Previous research has stressed the need to tailor cognitive mental skills training interventions to specific sports (Thomas and Fogarty, 1997; Silva and Weinberg, 1984). The results of the first two parts of the study revealed that the inability to focus, worries about abilities/skills, not living up to potential/expectations, coping with pressure, lack of self-belief, lack of confidence, worries about performing poorly, lack of communication, lack of preparation/readiness, lack of mental toughness, lack of organisational skills, leadership issues, and team dynamics, where the most prominent stressors that elite female hockey players experienced. These findings supported the need for elite athletes to acquire a wide range of coping skills to effectively manage competitive stressors. Therefore, the intervention was designed to assist elite female hockey players develop a wide range of skills in order to deal with the variety of stressors identified above.

Specifically, the workbook was presented in three chapters of general areas of mental skills. Chapter One – '*The Tough Stuff*' introduced the concepts of mental toughness, coping with pressure and keeping one's focus. These skills were crucial elements of the workbook, as the inability to focus and coping with pressure were salient stressors experienced by the participants of this study. Chapter Two – *'Thinking Confident, Being Confident'* introduced the concepts of self-talk, thought stopping and self-confidence. Such skills were designed to help assist players with worries about performance, lack of self-belief and lack of confidence. Lastly, Chapter Three – *'Fundamental Skills*' introduced the concepts of competition routines, mental preparation and the importance of communication. A common theme across the findings of the first two parts of this study was a lack of communication, lack of preparation/readiness and issues around organisational skills. Such findings is hardly

surprising considering that competitive sport places elite athletes under substantial pressure from a range of sources, such as organisational stress. In addition to the findings of the first two parts of this study, the content chosen in this workbook took into consideration the previous experience of the participants and the time constraints of the interventions. The content of the Coping MSTP was the same for all participants due to time constraints.

Chapter One: The Tough Stuff. The first chapter included introductory information, outlining the philosophy of the coping skills programme, mental qualities for hockey performance and 'attitude moments' within hockey. In addition, to enhance the importance of the mental aspect of hockey performance, quotes from elite hockey players and coaches obtained from the first two parts of the study were included. The remainder of the chapter provided theoretical and practical assistance for dealing with pressure, stress, worry, and concentration.

The theoretical segment of the sections on dealing with pressure, stress and worrying was largely based on the work of Barnes and Swain (2002); Bouffard and Crocker (1992); Froggat (2003); Jones, Hanton and Connaughton (2002); Lazarus and Folkman (1984); Madden (1995); Orlick (1986); Smith (1986a); and Walen, DiGiuseppe and Dryden (1992). Specifically, strategies for dealing with stress were provided, as well as appraisal/reappraisal techniques, exercises to identify and analyse the cause of worrying thoughts, strategies for 'letting go' of such worries, and exercises examining the controllability of various factors within hockey. Appraisal/reappraisal techniques and examining the controllability of various factors was identified in the first two parts of the study as a critical ability in helping participants cope. Specifically, the present study showed that the high coper was able to reappraise stressful situations to focus on the factors she could control to resolve the stressor, whereas the low copers were unable to do so.

The last part of the chapter provided information on keeping focused and was largely developed from the work of Abernethy (2001); Hardy, Jones and Gould (1996); Nideffer and Sagal (2001); and Summers, Christensen and Sheath (2002). Specifically, this included a definition of concentration, key aspects of focusing in hockey,

techniques to identify critical moments in the participant's game, and techniques for improving attention and concentration.

Chapter Two: Thinking Confidence, Being Confident. The second chapter of the workbook was designed around the concept of enhancing confidence. In addition, it also focused on two particular mental skills — self-talk and thought-stopping techniques. The concepts of self-talk and thought-stopping were defined, and exercises involving self-talk logs were used to examine positive and negative self-talk. The techniques of cue words and positive affirmations were introduced, and a thought-stopping exercise was included. This part of the chapter was largely developed from work by Bull, Albinson and Shambrook (2002); Hodge (1994); and Hodge and McKenzie (2002).

The last part of this chapter focused in depth on self-confidence, including, factors determining self-confidence, the benefits of strategies for enhancing self-confidence, and exercises to help facilitate self-confidence. The theoretical segments on self-confidence were largely based on the work of Bull, Albinson and Shambrook (2002); Hardy, Jones and Gould (1996); Hodge and McKenzie (2002); Vealey (1986); Vealey (2001); and Wiggin and Brustad (1996).

Chapter Three: Fundamental Skills. The last chapter focused on fundamental skills and pro-active strategies to help remove the stress and concern from competing in elite sport. Specifically, the chapter focused on both mental and performance preparation, and consisted mainly of practical exercises to develop these skills further. Techniques for improving preparation included developing pre-game preparation plans, game focus plans, coping plans, 'what if' scenario exercises, and a checklist of questions dealing with overcoming poor performances. Examples of such plans were also provided to give the participants a guide to developing their own preparation plans. The fundamentals of preparation were based on practical work done by Bull, Albinson and Shambrook (2002); Hodge (1994); Marshall (1998); and Orlick (1986).

The latter part of the chapter also dealt with difficult situations, which often arise from poor communication. The findings from earlier parts of this study identified

communication as an important factor in good performance. In women's team sports in particular, conflict due to poor communication is an area that needs to be addressed as a fundamental skill. The fundamentals of communication were largely based on the work of Convey (1992); Salter and Langford-Wood (2002); and Yukelson (2001).

In general, the workbook was designed to include a variety of the coping strategies used by those who coped effectively in the first two parts of the study. For example, such coping strategic included active coping, positive focus, planning, optimising emotions and positive self-statements.

Coping Skills Performance Profiles

The participants' coping performance was primarily evaluated using a Coping Performance Profile, where each athlete, their coach, another player who played alongside the participant, and a peer or significant-other (someone significant who takes an active interest in the athlete's performance) completed performance profiles (refer to Appendices Q & R). All participants completed self-report profiles, consisting of 21 items to assess their knowledge of, importance placed on, and use of mental toughness, coping with pressure, concentration skills, confidence, competition planning, communication, self-talk and thought stopping. All coaches, significant others and other players involved also completed a performance profile on the participant.

This consisted of 18 items assessing mental toughness, coping with stress, focusing on task/concentration, confidence, positive communication, and preparation and readiness. Essentially, the methodology is based on 360° feedback. According to Judge and Cowell (1997, the best executive coaches use this method to provide effective feedback for their clients. Research has shown that 360° feedback is a great method for promoting increased self-awareness of skill strengths and deficiencies in the corporate setting (Hagberg, 1996; Shipper & Dillard, 2000). Thach (2002) supported the use of 360° feedback in developing and honing the skills of, and preventing the derailing effects of poor performance in executives. A variety of other instruments were also used such as training logs, verbal feedback, and a social validity questionnaire.

Comment [UU1]: my words. Something was missing?

Mental Skills Training Worksheets and Verbal Feedback

Throughout the intervention, participants were given worksheets on which to record their mental skills training practice (refer to Appendix M). Participants were asked to complete a worksheet for each exercise as part of the intervention. Each worksheet was specifically designed to assist athletes gain a better knowledge of, and teach them how to use, practical mental skills. The format and content of the worksheets largely were adapted from other sport psychology practitioners.

As part of the intervention package, participants were provided with self-addressed envelopes and instructed to post their worksheets to the researcher for further evaluation. Such posting occurred at two stages during the intervention, specifically at week three and at the completion of the workbook (Week six). In addition to the value of being able to provide feedback on the work of the participants, this technique also worked as an internal check to ensure that the participants were correctly following the instructions of the intervention and keeping on schedule. Indeed, the researcher emphasised the importance of keeping a record of progress and requested that athletes keep the worksheets up to date.

In addition to the worksheets, during the course of the intervention, the participants were asked to give verbal feedback relating to how they felt about various aspects of the Coping MSTP. Verbal feedback occurred during weekly phone conversations between the researcher and participants. Reciprocally, the researcher also provided assistance by discussing issues with participants when they arose; and provided further advice, expertises, and general feedback. This interaction time provided an opportunity for participants to discuss which techniques were or were not working for them, any difficulties they may have been experiencing, and any issues regarding differences in performance noticed. The researcher made a written record of these phone conversations and of any relevant verbal feedback that was pertinent to the intervention.

Social Validity Questionnaire

A social validity questionnaire was administered 6weeks after the intervention started to determine whether any significant behavioural changes had occurred (Kazdin, 1982; Thomas & Nelson, 1996). The questionnaire was divided into two sections, which evaluated the acceptability of the procedures and the satisfaction with results (refer to Appendix S).

Limitations

1. Only elite female representative hockey players were studied, so the results are not generalisable to other hockey populations. Previous research has shown that gender differences exist across a number of stressors and settings (Endler & Parker, 1990; Ptacek, Smith & Dodge, 1994; Anshel, Williams & Hodge, 1997), therefore although outside the scope of this study, it may be interesting for future research to investigate gender differences in coping within field hockey.
2. This study is only a cross-sectional study. Coping is considered to be a very complex and dynamic process (Lazarus & Folkman, 1984), and athletes' coping skills are subject to change over time. Further studies may benefit from examining these variables on a longitudinal basis.
3. This study was voluntary and relied on participant consent; therefore, a bias may be created between those who volunteered and those who did not. In addition, the availability of elite athletes also may have biased the sample of athletes studied.
4. The methodology of this study relied on reflective self-report measures and retrospective interview designs. These methodologies were a limitation because what the participants said was happening may not necessarily have been an accurate response to what was actually happening.
5. Due to the availability of participants only a small sample of participants (n = 4) were able to take part in the intervention. Therefore, the participants were analysed as case studies and any significant differences found for participants were not were not generalisable to other elite hockey players. Further studies may benefit from using larger sample sizes and using an interrupted time-series design with switching replications.
6. In addition, due to the availability of the participants, the timing of the intervention (i.e., near the end of the year) resulted in several limitations. Specifically, a single-subject multiple baseline design could not be utilised as all participants had to begin the intervention at the same time due to time restrictions. In addition, the follow-up period of the intervention was relatively short (6weeks).

7. Due to time, resource and participant limitations this study utilised a standardised Coping MSTP across all four participants in the intervention. Considering the findings in the first two parts of the study it would have been more appropriate to have created individualised Coping MSTP for each participant based on their identified needs.

CHAPTER FOUR
Results

The primary purpose of this study was to explore the issues central to both coping in elite hockey and the coping needs of female hockey players in New Zealand. The second purpose was to design and evaluate a Coping Mental Skills Training Programme (MSTP), and to provide valid practical recommendations for female hockey players and coaches.

This chapter reports both the quantitative and qualitative results. Specifically, the chapter is divided into three parts: the first outlines the results found in the initial pilot study, the second outlines the quantitative and qualitative results, and the third part outlines the results from the intervention.

The first two parts of this study served as a reflective discovery process, in which the researcher explored the issues central to both coping in elite hockey and the coping needs of female hockey players in New Zealand. This third part evaluates the applied research results, particularly looking at the effectiveness of a Coping Mental Skills Training Programme (MSTP).

Part One: Pilot Study

The qualitative findings from the initial pilot study are presented through descriptive illustrations of the participants' experiences, and through schematic representations of hierarchical inductive analyses. The indented sections are direct quotes from the participants; such quotes serve to maintain the richness of the data. To ensure the participants' anonymity, the names of the participants cited in the following direct quotes have been changed. In the plain text there are also segments that use quotes from the participants, but these may have been reworded. Any rewording or illustrations of the participants' experiences have been done carefully, to maintain their original themes and ideas. In most cases, any rewording was done to represent a collection of thoughts from several of the participants, and to enhance the readability and continuity of the findings. There is some offensive language in a small number of quotes, but the

researcher believed that such language should be maintained, to protect the authenticity of the participants' comments.

Participants

Nine participants (players = 5, coaches = 2, administrators = 2) were interviewed by using a standardised open-ended approach. All participants were purposefully selected by the Administration Manager at Hockey New Zealand, and were involved in hockey at an elite level. Specifically, the players were all members of the current New Zealand Women's hockey team. Five players were interviewed in the initial pilot study as the researcher wanted to obtain a cross-section of players' experiences. Hence, two of the five players were new caps to the team, having only played 15 or fewer games for New Zealand. The other players were more experienced, having all played over 60 games for New Zealand, with one player having played over 100 games.

Obviously, since the study was designed around elite hockey players, those interviewed were viewed as an extremely rich source of information, and helped to provide depth to the findings. In addition, to ensure that findings of the pilot study were comprehensive, and that the width of the investigation wasn't too narrow, coaches and administrators were also interviewed. Indeed, coaches and administrators are often able to provide an objective opinion of players' experiences, from an outside perspective, and are sometimes able to capture issues that players themselves don't notice or can't comprehend.

These participants were very experienced, having been involved in hockey at either a national or international level for a substantial length of time (range 8 – 37 years). The two coaches involved were also very experienced, having coached for a number of years at New Zealand age-group level, and having recently provided assistance at New Zealand senior level. In addition, both the administrators who participated were currently involved at an operational level at both a national and international level.

Demands of Competitive Hockey

The participants were asked about the demands that competitive hockey places on players. Both from the verbal responses provided and the schematic representation of the results by hierarchical inductive analysis, it was evident that hockey is an extremely demanding team sport (see Figure 3). Specifically, Figure 3 illustrates the major demand dimensions. These are: preparation, managing players' expectations, self-awareness, mental toughness, coping with pressure, cognitive thoughts, coaching styles, team cohesion, skill competency, personal issues, affect, reading the game, commitment, and environmental issues.

In support of the hierarchical inductive analysis, the interviewed participants prominently expressed the following demand dimensions: preparation, personal issues, commitment, and finally, environmental issues. Specifically, aspects within the preparation dimension focused on time management/organisational skills, as players had to juggle full-time work commitments with structured team training times, individual training, and attending promotional events. The personal issues dimension involved nutritional, recovery, and injury rehabilitation requirements needed to maintain optimal condition.

Notably, a number of environmental issues were identified that also relate to organisational stress. Specifically, the environmental issues identified related to the competitive environment, selection, access to competition, travel, accommodation, and financial concerns. The commitment dimension was concerned about the sacrifices elite level hockey places on the players (e.g., time away from family/partners, social sacrifices, and lack of time for work/career). The mental toughness and coping with pressure dimension related to pressure to perform, particularly performing under intense pressure, where players are expected to be mentally tough. The reading the game dimension related to tactical awareness, and having the ability to anticipate play. A particular aspect expressed by one of the coaches addressed the transferability of learning into the game.

Across all participants, *time pressures* and *organisational stress* (e.g., due to *environmental issues)* were viewed as major demands on players. In addition, the participants identified the demands involved within the sport itself. Such demands are directly related to the

time commitment involved in participating in the sport. Hockey as outlined in more depth in the review of literature, is a demanding sport because of the vast number of technical skills involved in the game, which was illustrated in the present study through the dimensions of skill competency and reading the game. In addition, like most team sports, a large range of factors are involved in achieving overall success. These include overall fitness (general stamina, speed of reaction, strength, flexibility, agility, and dexterity) and tactical awareness (methods of team play, systems (formation of team), set plays, positioning, team roles, and so on). In addition, the team environment itself adds extra training demands, through the need to coordinate training and work towards team goals. It is hardly surprising, considering such factors, that time commitment and organisational skills featured as a major demand of the sport. Specifically, commitment dimension related to sacrifices e.g., time away from friends/family, strain on relationships, priorities no time for work or career, and social sacrifices. The below in-depth quote helps to provide a greater understanding of the variety of issues that players have to work on.

> Obviously, the training side of hockey is just huge, because hockey covers so many different areas. For example, physical fitness is broken down to aerobic and anaerobic training, agility, speed, power, strength — things like gym-type work and core stability-type work. So that alone is quite demanding in itself. Then on top of that you have got the hockey-specific training, including individual time and the time spent at the turf with your team, and those are usually committed times because you only have certain turf time available. Depending on the time of the season, the amount of hockey-specific training differs. At some stages you could have provincial, New Zealand, and club training all on. I hate that time of year because it means that you are out at the turf four nights a week, plus game commitments in the weekend, and you have to fit all your physical training around those times. Then there are other aspects, like the mental-type training, depending on whether you are into that type of training. Plus, on top of that we are all full-time workers and a lot of us are in professional type jobs, i.e., an accountant, in which case you have to be on to it and do have a commitment to the people you work for. Plus now that I'm injured, I've noticed how much more demanding work is when you are injured

> because now I have to fit in rehab, get to the doctors, physiotherapist, get a massage. Right now I'm feeling the heat. It's just a huge time commitment. Apart from the actual physical demands it is hugely time- consuming overall, even being organized. For example, you have to get your nutrition right, like making sure that I have got enough of the right food at work so that I am able to eat two hours before my training. Things like that are important and it's just sort of got to be organised. (Vanessa, Player).

Changes in Demands and its Influence on Hockey

In recent years the demands of hockey in New Zealand have changed dramatically. A good performance at the Sydney Olympics in 2000 raised the profile of hockey within New Zealand significantly. As a result, participation in the sport rose dramatically, with an increase in New Zealand children choosing to play this sport. Such promotion was great for the sport, but with a higher profile came more demands on the players. Players are now subject to greater exposure, and have to deal with more media requests. Heightened awareness through media coverage now means players' performances are more public. Indeed, players can receive bad press coverage due to poor performance whereas previously this was not an issue for players as there was minimal media coverage. In addition, players have to schedule extra demands, like public engagements, as part of being an elite player. The quote below illustrates the influence the Sydney 2000 Olympics had on the profile of the sport.

> I guess there are media pressures, which were never really a big thing for us a couple of years ago. But since the 2000 Olympics we have had quite a high profile and there is a lot more media pressure. Some people are affected; I let it affect me a couple of years ago in the World Cup because I had some bad publicity. Like, I never got any publicity at all, and then one day I did and it was bad. I was really embarrassed about it and it really rocked me. (Vanessa, Player)

Mental Toughness

Participants were asked about the characteristics of mental toughness. In general, participants described mental toughness as the ability to: “perform at key moments”, “never give up”, “adapt to different situations”, and lastly “handle the pressure”. Mentally tough people were those individuals who have a “fuck-you attitude”, who make “good decisions” can “handle the high pressure moments” and “would never give in even though they may want to”. The following quotes are used to help illustrate the participants’ responses, and how they personally defined mental toughness:

> I would say the key thing about mental toughness is performing at key moments. And that’s when there is a lot of pressure on, when it could be that getting a result is really, really important. It could be down to a key moment in the game where you need to put a goal away and you have only got one chance to do it. If you are mentally tough you do it. And part of getting to that point of mental toughness is doing the hard yards for your training. Being uncompromising in your preparation. I think for me the people that are mentally tough are the people that can handle the high-pressure moments when you need to perform.
> (Sonya, Player)

> The ability to capitalise at key moments. It is about making good decisions and the appropriate actions at key moments. It is about having a ‘fuck-you’ attitude — this is hurting, this is hard but you keep going and not drop out and give up. (Gillian, Coach)

> A mentally tough person to me is someone who can cope with whatever situations arise or whatever happens on and off the field and not let it affect their performance to reach their goal whether that’s to win the match, to win the tournament or whatever. When the going gets tough that’s when you have got to be able to do it.
> (Debbie, Administrator)

Stressors in Competitive Hockey

The participants were asked from their observations and experience what they felt were the major stressors that hockey players have to contend with in competitive hockey. Both from the verbal responses and the schematic representation of the results by hierarchical inductive analysis, it was evident that hockey players have to cope with numerous stressors (refer to Figure 4). As illustrated in Figure 4, it is evident that the major stressor dimensions revealed were: focus, cognitive content, performance issues, self-belief, confidence issues, communication issues, preparation, mental toughness, organisational skills, coaching styles, and team dynamics.

In support of the hierarchical inductive analysis, the participants prominently expressed the following demand dimensions: cognitive content, self-belief/confidence issues, preparation, and team dynamics. In addition, the inability of focus was a common theme across all participants. In addition, the lack of communication will also be briefly discussed with team dynamics.

The cognitive content dimension was related to expectations on the players, coach-centred thoughts (e.g., concern over coach's reactions), perceived unfair umpiring decisions, and assorted thoughts about worrying or concerns about a variety of issues (e.g., media pressure, injuries, opposition). The self-belief dimension was related to players' concerns regarding making the starting line-up and getting game time, doubts about their performance, ability, concerns about losing, doubts about preparation, and negative thoughts in general. Confidence issues were also discussed, particularly in relation to a lack of confidence, previous experiences, and older team members not having confidence in the younger players. The preparation dimension related to players' feelings of a lack of preparation for the conditions, troubles with playing out of season, and overall lack of readiness. Lastly, the team dynamic dimension was largely related to other players' actions and their roles.

To complement the findings from hierarchical inductive analysis, quotes have been included below. These quotes provide context to the findings and also highlight the complexity of the stressor dimensions. It is evident from the quotes that the stressor dimensions often interrelate. For example, one of the coaches (Gillian) stated that often, the stressors experienced

in the team dynamic dimension, such as when a player is doing more than their role and the whole team structure falls apart, is also related to confidence. Specifically, this relates to the ability to have confidence in each other. In addition, general cognitive content dimension issues such as worry or concerns, are often related to inadequate, or a lack of, preparation. Therefore, the dimensions found within the hierarchical inductive analysis are often complex and interrelated to other dimensions. This finding is hardly surprising, given the complexity of both stress and coping. The below quotes are loosely grouped under the prominent dimensions described above.

Cognitive Content

Expectations, whether they are from the public, media, coaches, or the players themselves, were identified as stressors for a number of the players interviewed. In addition, concerns about the coach's reactions and the coach putting pressure on players also emerged, and are related to the coach's expectations of players and coaching styles. Another central construct related to both expectations and concern with coaches' reactions is related more specifically to a performance issue. Indeed, as the first two quotes illustrate, the *expectation to perform* has an *influence* on players' *stress levels*, and it is when poor performance occurs that players are most concerned, particularly around the consequences of such poor performance. For example, it is when "you haven't performed that you get worried about what's he (coach) is going to say".

> *The expectations.* The expectations of the public, the expectations of media, expectations to perform, your own expectations on yourself, all influence your stress levels. Leadership roles can put stress on some people. The coach is a big one.
> (Sonya, Player)

> After the game, I suppose if you haven't performed then you get a bit worried about what he's (coach) going to say. Is he going to blame somebody? 'Why didn't you perform?'
> (Tessa, Player)

The coach's actions and style emerged as a prominent stressor, and were extremely influential in the players' cognitive content. They have the potential to influence such factors as the players' emotional state. The following quote highlights the effect uncertainty about coaching decisions has upon players.

> Find it stressful when you are having a good game then you dragged off. No one explains why you have been brought off. This situation has the potential to make you emotional. In the last case I wound up very emotional, upset.
> (Kate, Player)

Lack of Self-belief/Confidence

The quote below is a classic example of the types of self-doubts hockey players can experience before competing, such as *Am I prepared? Can I play the way the team wants? What if I play* bad *rubbish? Will it be my last game?* Specifically, this quote reveals the central concern about ability to perform, and identifies the concern around consequences of poor performance. Such concern could be caused by over-anxiousness, nerves, being under-prepared, or feeling unable to meet the demands of the situation. Naturally, as a result, the player in this quote is experiencing self-doubts. For example, "Am I going to be able to do my job on the field?"

> I think just constantly thinking about the actual game itself. Other stresses before the game are the normal ones. Have I done enough? Am I prepared? Can I play the way the team wants me to? Am I going to be able to do my job on the field? What if I get out there and it all goes to custard? What if I play rubbish? Will that be my last game? If I play rubbish will I get subbed off, and then what happens? Those are the sorts of things that I probably sort of think about, and that when I talk to other people they sort of go through.
> (Tessa, Player)

Lack of confidence was another important stressor clearly identified by the participants. Participants expressed throughout the interviews that confidence plays an important role in performance. They viewed a lack of confidence as being directly detrimental to both individual and team performance. Particularly, past performances and confidence in the team (e.g., have the combinations developed) were viewed as central factors in performing well. In addition, the younger players saw a lack of trust and confidence in them by the older players as having a major impact on their performance, and as being very stressful for new players to the team. Specifically, they felt that when older players didn't communicate effectively with them or didn't have the confidence in them to "give them the ball" it made them feel "not good enough" and viewed it as being detrimental to their confidence within the team.

> For a new cap one thing that is tough is when you are playing and the other players don't give you the ball. Makes you feel not good enough. Especially for a new cap, it drops your confidence.
> (Kate, Player)

Raw Data Themes	*High Order Themes*	*Superordinate Themes Dimensions*
	Working full-time/extra demands	
	Maintaining full-time work/having time for work	
	Time commitment/structured-training times	
	Sport science influence – more training and coordination	PREPARATION (Organisational skills/
	Promotional events to attend	time management)
	Time pressures/trying to fit in all aspects of life	
	Player expectations - unrealistic	MANAGING PLAYERS' EXPECTATIONS
	Own high expectations	
	Lack of ownership over bad performance	SELF-AWARENESS
	Self-awareness	
	Mentally tough	MENTAL TOUGHNESS
	Emotionally tough	
	Perform under intense pressure	COPING WITH PRESSURE
	Push outside comfort zone	
	Coaching styles	COACHING STYLES

Incompatible coaching style		
Task cohesion – working towards same goal		
Tension because of personal goals within the team	TEAM COHESION	
Team environment/playing as a team		
Physically tough		
Variety of components/highly skilled game	SKILL COMPETENCY	
Number of skills/components to learn & practice		
Importance placed on diet	Nutrition	
Nutrition – having the right foods available	Food Preparation	
Recovery	Adequate recovery	PERSONAL ISSUES
Body tiredness	Physically tired	
Injury	Injury	
Rehabilitation	Rehabilitation issues	
Trouble sleeping/restless	AFFECT	
Nervousness/tension		
Lack of tactical training		
Transferring learning into the game	READING THE GAME	
Anticipating/reading play		

Tactical awareness		
Time away from family/partners		
Strain on relationships	COMMITMENT/SACRIFICES	
Priorities – no time for career/work		
Missing out socially		
Number of games in a season	Competitive environment/	ENVIRONMENTAL ISSUES
Number of tournaments	Increase in competitive demands	
Selection process	Selection	
Ambiguous selection process/Political	Political influences	
Cost to players/loss of income	Financial concerns	
Employers – worry about time off work	Job insecurity	
Expense of travel	Costs	
Location – isolation/travel	Access to competition	
Lack of access to competition		
Travelling long distances	Travel	
Incompatible roommates	Accommodation issues	

Disturbed sleep patterns Lack of sleep

Figure 3. Schematic representation of the results of hierarchical inductive analysis on the demands of competitive hockey.

> One of the main things that actually impacts on our team I reckon mentally, is partly around past performances and confidence. It's hard to describe, but it's around confidence. Past history is how confident you feel in beating them or how confident you feel they are around you. Have the combinations you have developed?
> (Sonya, Player)

One participant believed that the ability to cope with factors such as umpires or opponents (factors outside the control of the player) is greatly influenced by confidence and belief in her ability to cope. Specifically, the player believes that if she is confident, having a good day, she can deal with external factors such as umpires. However, if she is not having a good day she'll "let it get on top of" her.

It is evident in the quotes below that the selection process causes the participants stress (e.g., "don't cope being on the bench. Especially worry about make the starting line-up.") In addition, the quotes identify the influence that selection and performance have on players' confidence. For example, players often felt "depressed, useless, not part of the team", and even experienced self-doubts, such as "doubt if I'm ever going to get back in the starting line-up". As a result of spending time on the bench, one participant expressed that she began "to doubt my ability and performance concerns creep in" as a result.

> Not playing well is a big stressor. It gets you upset. Don't cope being on the bench; especially worry about making the starting line-up. So whether you are on the starting line-up or not is stressful. If you are not playing well and are the on bench, you feel a bit useless, depressed, doubt if ever going to get back in starting line-up.
> (Kate, Player)

> Stresses of sitting on the bench or team selections are huge, especially if not fit enough. The stresses of fighting for a place in the team. There is nothing worse than going away and sitting on the bench. That can be a major stress, especially at the end of the game

> because you feel like you are not part of the team. You also begin to doubt your ability and performance concerns creep in. There are stresses of course of squads being named. That's a huge one, of whether or not you are going to make it.
> (Kerry, Player)

Lack of Preparation

Lack of preparation was a generic stressor identified by all participants. It was expressed largely through its influence on performance, self-belief, confidence, and cognitive content. In general, participants felt stressed when they had a lack of preparation, whether it was being physically unprepared or having had a poor warm-up. When feelings of being under-prepared were revealed, most of the participants felt unable to cope, or believed they weren't capable of coping, with the stressors that arose. Also, especially for new caps, there were general feelings of a lack of readiness, being unprepared for the conditions of international level and also pressures related to being in a new team.

> I'm OK if I'm physically prepared, but when you feel under-prepared it makes you worry. Especially because, as a new player, you feel under pressure already, with things such as all the set moves. Knowing what to do in a new team is already stressful. I used to get stressed out every time I'd get the ball.
> (Kate, Player)

> In my opinion, with the last test series we were unfit and unable to cope. We weren't capable of playing 8 games in 12 days. We hadn't had enough games before the test series, and we were not prepared to play that many games with little rest periods. We were slow, not fit enough. The team couldn't handle the heat. We can beat Australia, but need to be prepared to do so.
> (Kate, Player)

> I do worry a bit. Actually I do get stressed about my warm- ups. If my warm-ups aren't that good and I go into a game worrying and I get stressed about that. Or if I am not hitting it right before we go into the game.
> (Kerry, Player)

> Pressures of a new team e.g., new set moves, positioning, patterns of play to learn etc. Also you are unprepared for conditions of playing at that level and wonder if your going to be able to perform.
> (Kate, Player)

Team Dynamics

Naturally, within team sports, team dynamics are crucial to the success of the team. However, as identified, team dynamics does have the potential to create stress for the members of the team. Team dynamics was referred to by the participants as "how well the team gets on", and was viewed as an important aspect by most of the participants. The majority of the stressors identified by the participants related to the performance of others, such as issues around *roles*. Specifically, if players were not fulfilling their role within the team, or a player was doing more than their role, the participants found the team structure fell apart. As a result this would lead to a breakdown within the team, and often it was destructive, when poor or a lack of communication was evident. Communication within the team was also identified as an important part of team cohesion and the overall dynamics of the team.

> Players doing too much. When a player is doing more than their role the whole structure falls apart. It's about having confidence in each other.
> (Gillian, Coach)

> Only get too stressed when things on the field aren't going right, like our structure at the back for some reason isn't working, or it's really, really tight and you are just throwing

the ball back to the opposition. So I think 'Come on, what are you doing?' I'm both annoyed at other players and stressed at other players because the players aren't doing their job. I get very frustrated when you talk about that kind of situation where you are 2-1 up and there is 5 minutes to go and we have talked about what we should be doing and people don't do it.
(Tessa, Player)
I think other people's play affects other people in the team. They will get stressed if someone's beaten every time by their wing or something. And they lose the focus.
(Sonya, Player)

In terms of team dynamics, I mean, how well the team is getting on. Team spirit. Whether people are really nervous, making you nervous, or stuff like that. Obviously the team is one thing that has a pretty big impact on you in a team sport.
(Sonya, Player)

You don't know where you stand with the current coach because he doesn't give enough feedback, both positive and negative. This makes me get down, not hard or positive enough.
(Kate, Player)

Raw Data Themes	*High Order Themes*	*Superordinate Themes Dimensions*
Lack of focus	FOCUS	
Pressure on oneself – own high expectations	Player expectations	COGNITIVE CONTENT
Expectations of public/media	Expectations of public	
Coach demands	Expectations of coach	
Expectation of achieving outcomes	Expectations to perform	
Concern about coach reactions	Coach-centred thoughts	
Consequences of bad performance	Concern about consequences	
Uncertainty about coach decisions	Lack of feedback	
Umpires – perceived unfair decision	Umpired-centred thoughts	
Opposition – rough play/verbal abuse	Thoughts of other's actions	
Worry about injuries	Concern about injuries	
Uniforms – how look and feel	Assorted thoughts	
Crowd size/Spectators – worry about what others' think	Evaluation of performance	

Worry about media pressure	Media Pressures	
Bad publicity	Fears of poor performance	
Bad performance	Poor performance	
Coping with losing	Coping with poor performance	PERFORMANCE ISSUES
Reality of results	Consequences	
Not achieving goals/disappointment	Feeling like a failure	
Not reaching expectations	Letting yourself down	
Negative pre-game thoughts	General worry	SELF-BELIEF
Concern about being taken off	Self-doubts	
Concern about making team/starting line-up	Selection concerns	
Doubts about performance	Self or team doubts	
Doubts about ability	Self doubts about ability	
Concern about losing	Concerns about losing	
Doubts about preparation	Doubts about readiness	
Lack of confidence	Lack of confidence	CONFIDENCE ISSUES
Concerns over previous games	Poor previous performance	
Older players not having confidence in younger players	Lack of confidence in others	
Lack of communication		
Lack of information		
Lack of feedback on performance	COMMUNICATION	

– coach/other players	ISSUES
Lack of composure/yelling	
– negative comments	
Lack of pre-game preparation	
Lack of readiness	
Maintain match fitness out of season	
Playing out of season	PREPARATION
Pressure of new team	
Unprepared for conditions	
Pressure situations	MENTAL TOUGHNESS
Inability to perform at key moments	
Time pressures	ORGANISATIONAL SKILLS
Time commitments	
Incompatible coaching styles	COACHING STYLES
Coach putting excessive pressure on players	
Team cohesion	Team cohesion
Individuals focusing on self rather than team	Team personalities
Tension between players	Conflict
Other players acting anxious/nervous	Other players' actions

Other players' actions/yelling at you	Negative team communication	TEAM DYNAMICS
Other players' poor performance	Other players' poor performance	
Someone in a key role – off the field	Roles	
Players doing more than their role	Lack of confidence in other players	

Figure 4. Schematic representation of the results of hierarchical inductive analysis on the stressors of competitive hockey.

Players' Reaction to Stressors

Overall, the participants believed that a player's reaction to stressors is individual to that player. Indeed, there are a number of individual differences in how players usually react to a stressor. However, in general, the participants usually stated that players reacted in one of the three ways: a) the player copes effectively and is able to continue to maintain optimal performance; b) the player becomes outwardly unsettled; or c) the player withdraws inwardly. How players' performances were influenced by reacting as in either b) or c) was dependent on the individual. Although sometimes players' performances did improve, mostly it resulted in a suboptimal performance, or being substituted off the field.

While it was acknowledged that some players are able to cope effectively with stressors and maintain optimal performance, it was identified that a lot of players, even experienced players, still react negatively to stressors. For example, the following quote was made by one participant:

> It is really unsettling when one of the more experienced players loses their composure. It obviously means that they aren't coping with the situation, or with a stressor etc., and often directly affects the team's performance. This has major ramifications for the team. Not only does their performance drop but quite often they yell at you as a direct result of losing their composure, which affects your game as well.
> (Tessa, Player).

The participants felt that, generally, if a player becomes outwardly unsettled, it has a negative influence on the team's performance. Specifically, either the player who is outwardly unsettled, or the other players', performances usually decline or are suboptimal. Participants defined players who become outwardly unsettled as individuals who often demonstrate one or several of the following reactions: panic, get upset, lose their temper, yell at umpires or other players. The quotes below help illustrate players who are outwardly unsettled.

> Often people react by panicking on the field. You can tell by the tone of their voices or the way that people are talking. However, others go quiet and don't talk. Generally, if it is noticeable to others it is a concern for the team, especially if someone is panicking, because often the team actually begins to spiral downwards on our play. I guess you feed off each other and things get worse and worse.
> (Vanessa, Player).

> Some people get really, really nervous before the game, like it all gets on top of them and you can tell by the way that they are talking, or their actions. They just have that whole uptight look, walk. They can't sit down. Very nervous kind of energy which you are sort of thinking 'oh no, big trouble'. I don't think nervousness is necessarily bad. Nervous is good. Over-nervous is bad. So for me, if I can see people are nervous I think they are probably over the edge.
> (Tessa, Player)

The participants tended to view withdrawing inwardly as generally being a negative influence on performance. Although it has less of an effect on influencing other players' performance, it isn't really productive to team performance. The main issue that the participants felt was disruptive to the team was that the affected player fails to communicate to the other players. All participants believed a breakdown in communication was detrimental to team cohesion. The participants defined withdrawing inwardly to be shown by one of the following characteristics: distracted, stop communicating/talking on field, display a lack of awareness, want to substitute off the field or voluntarily do so.

> Sometimes you notice players missing the ball, they're just not with it. Like not listening to the calls, yeah, and just not onto it, not in the right place at the right time. Which is a good sign that someone is distracted and has got their mind elsewhere.
> (Sonya, Player)

> Sometimes players miss a tackle because they are not up there in the right position. Generally, if someone is not in the right position, that can often be because they are not sharp, onto it, awake, or alert. So yeah, some people go quiet whereas other people get loud. (Sonya, Player).

The above quotes highlight the influence that increased arousal and state anxiety has on hockey performance, causing changes in attention and concentration (Nideffer, 1976; Williams & Elliott, 1999). Consistent with the findings of Landers, Wang, and Courtet, (1985), the above examples show how, when players' arousal is increased, they tend to scan the environment less by narrowing their attention, and thereby often miss relevant cues. In the above example, the player may have been unaware of the other players' intentions and, as a result, failed to be in the right position to receive the ball. Indeed, the above quote highlights the need to integrate understanding of arousal, stress and anxiety when providing practical applications.

Knowledge of Strategies to Help Players Cope with Stressful Experiences

Some of the players, even, surprisingly, at international level, did not show a good understanding of strategies to help players cope with stressful experiences.

> I must have heard what coping strategies there are around the place, but I couldn't tell you what they are off the top of my head.
> (Vanessa, Player)

Although participants' overall knowledge of coping strategies was poor, one of the players, and the coaches, had a good knowledge of basic sport psychology principles and strategies. Below is a list of the coping strategies participants were aware of:

- Planning and preparation
- Goal setting
- Focus on basics – cue words

- Relaxation
- Visualisation
- ‘What if’ scenarios

In addition, a number of participants had used coping strategies but were unaware they were doing so, or didn’t specifically define them as coping strategies. For example, the quote below illustrates the use of preparation strategies by Vanessa, the same player above who “couldn’t tell you what they [coping strategies] are off the top of my head”.

> I like to know as much about the opposition as I can before I play a team, so there are no surprises and again it’s all in my head but I don’t have to consciously worry about it the whole game. (Vanessa, Player).

Main Issues that Participants’ Wanted this Study to address?

The participants were asked what were the main issues they would like this study to address. This question helped identify what the participants felt were the pertinent areas in which players needed assistance. Participants identified the following:

- Self-belief
- Confidence
- Coping with pressure
- Coping with poor performance
- Managing player expectations
- Communication

Self-belief was identified strongly throughout the interviews as a quality that New Zealand female hockey players need to develop more. The majority of participants believed that New Zealand hockey players need to believe in their ability, and to truly believe that they have

the capability to succeed. *Confidence* was also an area identified by the majority of participants. For example, a number of participants made statements similar to the following:

> Areas where players need assistance. Well, mental toughness, confidence, and self-belief are the major ones, particularly belief in our ability to beat the opposition, especially at New Zealand level. We are not brought up in a country that tells us we are great hockey players. We don't think of ourselves as great hockey players. Other countries do; they always rate themselves and are arrogant that they can beat the opposition. We don't think like that.
>
> (Sonya, Player).

Coping in general, coping with pressure, and coping when the game does not go to plan were all identified as areas where players need assistance. The following quotes reiterate the need for assistance in coping:

> I've struggled with the ability to cope most of my life. It took me a long time to be able to cope effectively, so it would have been great if I was taught it or learnt it earlier. In addition, self-belief needs attention because I think that's where we New Zealand athletes are way behind the rest of the world as far as believing and having confidence. Actually believing, cos we will walk out onto the field and see the Australians, and we have lost it basically before we have even started because 'oh my god, we're playing Australia' type of thing. We have to start believing because I reckon that's why a lot of New Zealand sports teams lose games in the last five minutes. We've done it, and so have the netballers. I think it's the self-belief in knowing 'OK, we are going to win this game, it's won, let's wrap it up, let's finish it off'. Whereas at the moment, I don't think we cope with that very well.
>
> (Vanessa, Player)

> Things that have an impact on us are a) how the team is performing – dealing with poor performance; b) game situation – coping when things don't go to plan; and c) probably expectations, like whether there is huge pressure on us to get a result in a game.

(Sonya, Player).

Assistance in accepting that they have made a mistake. And that the world is not going to end because they have mistrapped.
(Sally, Coach)

Some of the more experienced participants believed that academy-level players need to be the focus for assistance. In particular, some participants felt that the younger players need to come into the New Zealand team knowing what to expect. The coaches in particular believe that more assistance in managing the younger players' expectations is needed. The quotes below from one player clearly identify the general thoughts, and help emphasise the above comments.

It's about getting the younger ones to come through, knowing what's going to happen, what expectations there are of them, what they should expect, how they are going to cope with a test match, having strategies already in place. That is the sort of thing we should be doing in the academies.
(Tessa, Player)

Learn from experience, try out at academy level. The last thing you want to do is try and work out what works in a test match. You want to do that at lower levels. Better to try when you know the pressure isn't there so you can try strategies and see what works for you.
(Tessa, Player)

There is no way I expect people coming in being immediately up to international standard, because they have never played it. So we have to set realistic expectations for them. And I think it is important for them to understand that the only way they are going to improve is to make mistakes.
(Tessa, Player)

Communication was a central issue that was mentioned widely throughout all the interviews. All participants believed communication is a key element in achieving team cohesion and performance success. Most often it was the player participants who stressed the importance of communicating effectively. Areas where players would like to see communication improved are illustrated through the following quotes:

> I think the younger players can learn a lot form the senior players by just talking to them, asking them questions. I don't think we communicate effectively enough at times.
> (Sonya, Player).

> At the Champions Trophy recently that was a big step for a lot of our players because it was such a huge tournament. And you notice when a couple of them didn't perform in the first couple of days you could see their confidence, they just lost all their confidence. I think I'd like to think that the senior players would be approachable enough to talk to. It is quite hard sometimes for us to approach them to say 'How's it going', cos that could spiral them into thinking 'Well I must be playing bad if she has to come up and talk to me about it', so it's sort of hard for us to say 'Look, is something wrong?'
> (Tessa, Player)

> I do think sometimes when a new player makes a mistake they think 'What will so and so think?' and you know some do, but it's a two-way thing. We need to be approachable and say 'Hey, look, it doesn't matter. Let's talk it through. What were you thinking? OK, because I thought you were going to make a tackle and you didn't. What was going on?' But they also have to go 'OK, this is a step up and I am here because I'm good, and I have to make the most of that opportunity. Whether a player communicates effectively determines how they are able to fit into a team.
> (Tessa, Player)

Part Two
Quantitative Results

The information collected was surveyed for missing data and it was found that, for this data sample, missing data was not considered a problem as the amount missing data was minimal. During data collection the researcher ensured that participants self-checked the questionnaire, to ensure that all questions had been answered. This minimised the amount of missing data, and only one participant missed out a question. The overall amount of missing data was relatively small compared with the total sample size; that is, less than 0.1%. However, a supplementary estimate was created to account for missing data.

Participant Demographics

One hundred and seventy-four players at the New Zealand National Championship tournament completed the questionnaire. Their ages ranged from 15 – 45 years and they had an overall mean age of 24.07 years (SD = 6.81 years). The number of years that participants had gained competitive hockey experience ranged from 2 – 33 years, with an overall mean experience of 13.86 years (SD = 6.79 years). In addition, the mean length of national women's hockey league or national women's tournament experience was 5.32 years (SD = 5.02), with a range of 1 – 24 years.

Preliminary Analyses

Internal Reliability of Scales

Internal reliability analyses were calculated for all of the scales utilised within the current study. Cronbach's alpha-coefficient provides an indication of the average correlation among all the items that make up a scale. Nunnally (1978) recommends a minimum level of 0.7.

COPE. An overall Cronbach's alpha-coefficient of 0.92 was obtained for the COPE, with the subscales having coefficients of 0.76 for positive reinterpretation, 0.69 for active coping, 0.81 for planning, 0.86 for emotional social support, 0.82 for instrumental social support, 0.61 for suppress competing activities, 0.71 for acceptance, 0.64 for mental disengagement, 0.63 for behavioural disengagement, 0.75 for focus on venting emotions, 0.70 for denial, 0.65 for restraint and, lastly, 0.89 for humour.

Five of the eight subscales obtained a Cronbach's alpha coefficient of less that 0.70. Specifically, these were the active coping, suppress competing activities, mental disengagement, behavioural disengagement, and restraint subscales. As stated previously by Nunnally (1978), ideally the Cronbach's alpha-coefficient should be above 0.70. However, the values are sensitive to the number of items in the scale. As the COPE comprises short subscales, with only four items in each, it was considered more appropriate to obtain the mean inter-item correlation for the items. Briggs and Cheek (1986) recommended that an optimal range for inter-item correlations is between 0.2 and 0.4. Therefore, the researcher re-analysed the reliability of the five subscales. Specifically, an inter-item correlation was obtained for each subscale: 0.36 (ranged from 0.13-0.48) for active coping, 0.29 (ranged from 0.07-0.45) for suppress competing activities, 0.31 (ranged from 0.23-0.42) for mental disengagement, 0.30 (ranged from 0.25-0.43) for behavioural disengagement and lastly 0.32 (ranged from 0.24-0.38) for restraint. The researcher concluded that the restraint, mental and behavioural disengagement subscales of the COPE were internally reliable. However, the active coping and suppress competing activities were not.

These coefficients are comparable to past research. Specifically, Pensgaard and Duda (2000) found Cronbach alpha-coefficient values were satisfactory for nine of the subscales of the COPE. It should be noted that, while they acknowledged Nunnally's (1978) recommendation they argued that, when there are a limited number of items in the subscale, lower alphas should be accepted. Therefore, they keep nine subscales, and four subscales with a reliability of less than 0.60 were eliminated from subsequent analysis. As within the present study the reliability of all the subscales for the COPE were found to be higher than 0.60, the researcher decided that the active coping and the suppress competing activities subscales would not be eliminated from subsequent analysis.

The Sport Anxiety Scale (SAS). The Sport Anxiety Scale (SAS) had an overall Cronbach's alpha-coefficient of 0.89, with the subscales having coefficients of 0.85 for somatic anxiety, 0.86 for worry, and 0.76 for concentration disruption. These coefficients are also comparable to past research. Previous researchers, such as Smith et al. (1990), have shown that the SAS has high internal consistency. For example, Smith et al. (1990) obtained Cronbach's alpha- coefficient of 0.88 for somatic anxiety, 0.82 for worry, and 0.74 for concentration disruption, which is very similar to this study. They also found adequate test-retest reliability (r = 0.85), and convergent and construct validity. More recently, Dugdale (2002) found internal reliability of 0.84 for somatic anxiety, 0.72 for worry and 0.76 for concentration disruption.

Automaticity. The automaticity scale had a Cronbach's alpha-coefficient of 0.75 and inter-item correlations from 0.57 to 0.68. These coefficients are also comparable to past research. Dugdale et al. (2002) observed internal consistency of these items ($\propto$ = 0.76; item-total correlations from 0.47 to 0.68).

Table 1

Cronbach's Alpha Reliability Coefficients for Psychometric Scales

Scale	Alpha Coefficient	Mean Inter-item Correlation
COPE		
Positive reinterpretation	0.76	0.45 (range 0.32-0.59)
Active coping	0.69	0.36 (range 0.13-0.59)
Planning	0.81	0.52 (range 0.40-0.62)
Emotional social support	0.86	0.60 (range 0.46-0.73)
Instrumental social support	0.82	0.53 (range 0.41-0.62)
Suppress competing activities	0.61	0.29 (range 0.07-0.42)
Acceptance	0.71	0.38 (range 0.32-0.42)

Mental disengagement	0.64	0.31 (range 0.23-0.42)
Behavioural disengagement	0.63	0.30 (range 0.25-0.43)
Focus on venting emotions	0.75	0.44 (range 0.34-0.52)
Denial	0.70	0.38 (range 0.24-0.52)
Restraint	0.65	0.32 (range 0.24-0.38)
Humour	0.89	0.66 (range 0.53-0.76)
Sport Anxiety Scale		
Somatic anxiety	0.85	0.38 (range 0.22-0.62)
Worry	0.86	0.47 (range 0.32-0.68)
Concentrations disruption	0.76	0.39 (range 0.24-0.62)
Automaticity	0.75	0.61 (range 0.57-0.68)

Relationship between the Independent Variables

To assess the relationship between the independent variables simple Pearsons' correlations were performed at the 0.01 level of a two-tailed test. As illustrated in Table 2, the results revealed that age, number of years playing hockey and experience playing at the National Provincial Championships tournament were significantly correlated, with strong correlations emerging. Interesting the achievements of participants (highest level played) was not significantly correlated to age, number of years playing hockey and experience playing at the National Provincial Championships tournament.

Table 2

Simple Pearson's Correlations Comparison of the Independent Variables

Independent Variables

	Age	Year	Experience	Achievement
Age	-	0.72**	0.67**	0.11
Year	0.72**	-	0.66**	0.05
Experience	0.67**	0.66**	-	-0.07
Achievements	0.11	0.05	-0.07	-

Note. ** Correlation is significant at the 0.01 level (2 tailed).

Preliminary MANOVAs.

Preliminary MANOVAs were performed to determine whether there were differences due to age, number of years of playing hockey, experience playing at the National Provincial Championship (NPC) level, and/or achievements on all the variables used in the investigation. Such analysis would determine whether the differences on the above variables had any effect on the dependent measures — worry, somatic anxiety, concentration disruption — as well as on the 13 coping strategies, effectiveness of coping strategies, automaticity, whether stressors were expected/unexpected and performance. Due to the large number of variables, three MANOVAs were performed separately, one for COPE, one for the SAS, one for effectiveness of coping strategies, automaticity and performance. For each MANOVA no serious violations were noted in preliminary evaluations of normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity assumptions.

The sample was categorised into independent variable groups to examine any effect on the dependent variables. Specifically, the sample was grouped for age into four groups: 15-19 years (n = 57), 20-24 years (n = 47), 25-29 years (n = 34), and 30+ years (n = 36). Four groups were created based upon the number of years participants had been playing hockey (1-9 years (n = 50); 10-14 years (n = 56); 15-19 years (n = 32); and 20+ years (n = 36). The experience of the participants was defined by the number of years they had played at the National Provincial Championship (NPC) level. Six relatively even groups were created relative to NPC level

experience (1 year (*n* = 42); 2 years (*n* = 21); 3 years (*n* = 23); 4 years (*n* = 22); 5-9years (*n* = 28); 10+ years (*n* = 38)). Lastly, four groups were created based upon achievement (i.e., highest level played): (NZ/NZ Maori representative (*n* = 16); NZ Academy representative (*n* = 36); NZ age-group representative (*n* = 28); and provincial representative (*n* = 94)). Although the sample sizes were uneven, the researcher felt that the level of hockey played could potentially affect the findings.

Intuitively it seemed likely that independent variables such as age, experience, etc would be related to each other and so simple correlations among the variables were examined to evaluate the extent of colinearity that might exist. Age, number of years-playing hockey and experience playing at the NPC level were significantly correlated and strong correlations (i.e., 0.66 to 0.72) were observed. To eliminate any influence of correlated fixed factors in the MANOVA analyses and to simplify interpretation of results, only the factor "years playing hockey" included in the MANOVA analyses. This variable was chosen over the others, as it was divided into only four groups (1-9 years (*n* = 50); 10-14 years (*n* = 56); 15-19 years (*n* = 32); and 20+ years (*n* = 36), which were of adequate size and relatively even frequency. In addition, the number of years playing hockey was representative of the general experience level of the participants. Therefore, the researcher used the number of years playing hockey and achievement (highest level played) as fixed factors within the MANOVA analyses. As the achievements of participants (highest level played) was not significantly correlated to age, number of years playing hockey and experience playing at the National Provincial Championships tournament it also was included in the MANOVA analyses.

COPE Subscales MANOVA.. A multivariate analysis of variance was performed to investigate the differences in the number of years playing hockey and achievement (highest level played) on the dependent variables used: positive reinterpretation, active coping, planning, emotional social support, instrument social support, suppress competing activities, acceptance, mental disengagement, behavioural disengagement, focus on venting emotions, denial, restraint, humour.

A statistically significant multivariate main effect was observed for the number of years playing hockey, Wilks' Lambda = 0.68; partial eta squared = 0.12; F(39, 433.09) = 1.54, $p <$ 0.022. When the results for the dependent variables were considered separately, there were statistically significant differences among the number of years playing hockey categories for mental disengagement, F (3, 153) = 3.08, $p < 0.029$ subscale. No other significant multivariate interaction or main effects were observed.

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Inspection of mean scores for years of hockey participation groupings indicated that those who had been playing less than nine years reported the highest scores on mental disengagement, in contrast, those who had played 20+ years scoring the lowest: Group 1 *M* = 2.64 (*SD* = 0.84) (range 1-5); Group 2 *M* = 2.34 (*SD* = 0.82); Group 3 *M* = 2.36 (*SD* = 0.84); Group 4 *M* = 1.93 (*SD* = 0.56). Tukey's posthoc analyses revealed that those who had played 1-9 years (Group 1) were significantly different ($p < 0.01$) than those who had played 20+ years (Group 4). No other significant differences emerged for the number of years playing hockey.

SAS subscales MANOVA. A multivariate analysis of variance was performed to investigate the differences in number of years playing hockey and/or achievement (highest level played) on the dependent variables used: somatic anxiety, worry and concentration disruption. No significant multivariate interaction or main effects were found.

MANOVA Comparisons on the Effectiveness of Coping Strategies, Automaticity, Ability to Focus/Refocus, Expected/unexpected Stressors and Performance. A multivariate analysis of variance was performed to investigate the differences in number of years playing hockey and/or achievement (highest level played) on the dependent variables used: effectiveness of coping strategies, automaticity, ability to focus/refocus, whether stressors were expected/unexpected and performance. No significant multivariate interaction or main effects were found.

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Further Analyses

Analyses on the COPE was conducted both on unstandardised data and standardised data, to control for the influence of the number of years playing hockey differences (Nunnally, 1978).

There were no substantive differences between the results of both analyses, so the results of the unstandardised data are reported.

The Relationship between Coping Strategies, Anxiety, Effectiveness of Coping Strategies, Automaticity, Ability to Focus and Performance

Relationship between Coping Strategies and Anxiety

To assess the relationships between the subscales of the COPE and Sport Anxiety Scale (SAS) simple Pearsons' correlation was performed at the 0.01 level of a two-tailed test. The correlations between the subscales of the COPE (refer to Table 3) revealed a large number of significant relationships. Strong positive relationships were found between positive reinterpretation, active coping, planning, and seeking instrumental and emotional support, with *r* values ranging from 0.48 – 0.78. The correlations between the subscales of the SAS (refer to Table 4) revealed moderate positive relationships across all variables, with *r* ranging from 0.41 – 0.48.

The correlations between the Coping Strategies within the COPE and SAS are displayed in Table 5. Moderate relationships were found between mental disengagement across the three SAS subscale - somatic anxiety (r = 0.29), worry (r = 0.31) and concentration disruption (r = 0.39). These relationships were significant and positive correlations. Moderate relationship were also found for focus on venting emotions, and somatic anxiety (r = 0.27) and worry respectively (r = 0.31). Again these relationships were both significant and positive. Lastly a moderate relationship was found for denial and concentration disruption (r = 0.31), which was significant and positive. There were a number of other weak relationships found (refer to table 5).

Table 3

Simple Pearson's Correlations Examining the Relationship between the COPE Subscales

		COPE												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1.	POS		.59**	.65**	.48**	.53**	.48**	.49**	.10	-.07	.22**	-.09	.48**	.28
2.	ACT	.59**		.78**	.48**	.68	.56*	.24**	.13	-.15*	.16*	-.06	.45**	.15
3.	PLAN	.65**	.78**		.48**	.60**	.61**	.33**	.08	-.13	.20*	-.11	.46**	.23**
4.	ESS	.48**	.48**	.48**		.71**	.45**	.27**	.08	.09	.47**	-.03	.36**	.24**
5.	ISS	.53**	.68**	.60**	.71**		.50**	.30**	.08	-.06	.29**	-.07	.39**	.13
6.	SCA	.48**	.56**	.61**	.45**	.50**		.36**	.26**	.07	.33**	.14	.45**	.19*
7.	ACC	.49**	.24**	.33**	.27**	.30**	.36**		.24**	.14	.11	.13	.46**	.30**
8.	DISM	.10	.01	.08	.08	.08	.26**	.24**		.33**	.24**	.44**	.23**	.21**
9.	DISB	-.07	-.15*	-.13	.09	-.06	.07	.13	.33**		.25**	.44**	.13	.19*
10.	FVE	.22**	.16*	.20**	.47**	.29**	.33**	.11	.24**	.25**		.14	.22**	.08
11.	DEN	-.09	-.06	-.11	-.03	-.07	.14	.13	.44**	.44**	.14		.16*	.13
12.	RES	.48**	.45**	.46**	.36**	.39**	.45**	.46**	.23**	.13	.22**	.16*		.28**
13.	HUM	.28**	.15*	.23**	.24**	.13	.19*	.30**	.21**	.19*	.08	.13	.28**	

Note. * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2 tailed).

Table 4

Simple Pearson's Correlations Examining the Relationship between the Sport Anxiety Scale Subscales

	Sport Anxiety Scale		
	Somatic Anxiety	Worry	Concentration Disruption
Sport Anxiety Scale			
Somatic Anxiety	-	0.48**	0.41**
Worry	0.48**	-	0.41**
Concentration Disruption	0.41**	0.41**	-

Note. * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2 tailed).

Table 5

Simple Pearson's Correlations Examining the Relationship between Coping Strategies and Anxiety

	Sport Anxiety Scale		
	Somatic Anxiety	Worry	Concentration Disruption
COPE			
Positive Reinterpretation	0.11	0.04	-0.02
Active Coping	0.17*	0.02	0.04
Planning	0.11	0.06	-0.02
Seeking Emotional Support	0.10	0.16*	-0.05
Seeking Instrumental Support	0.05	0.06	-0.01
Suppress Competing Activities	0.20**	0.19*	0.11
Acceptance	0.06	0.05	0.02
Mental Disengagement	0.29**	0.31**	0.39**
Behavioural Disengagement	0.08	0.26**	0.15*
Focus on Venting Emotions	0.27**	0.31**	0.14
Denial	0.18*	0.15	0.31**
Restraint	0.14	0.10	0.12
Humour	-0.05	0.08	0.08

Note. * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2 tailed).

Table 6

Simple Pearson's Correlations Examining the Relationship between Coping Strategies and Effectiveness of Coping Strategies, Automaticity, Ability to Focus/refocus, Expected/unexpected Stressors and Performance

	Dependent Variables				
	Effectiveness	Automaticity	Focus	Expected/Unexpected	Performance
COPE					
Positive Reinterpretation	-0.16*	-0.05	0.09	-0.04	-0.25
Active Coping	-0.11	-0.03	0.16*	-0.15*	0.03
Planning	-0.08	-0.06	0.15	-0.06	-0.01
Seeking Emotional Support	-0.05	-0.08	0.11	-0.07	-0.04
Seeking Instrumental Support	-0.11	0.02	0.11	-0.02	0.02
Suppress Competing Activities	0.05	-0.18*	-0.01	0.00	-0.01
Acceptance	-0.15*	0.03	-0.03	0.02	-0.04
Mental Disengagement	-0.05	-0.07	-0.10	0.06	-0.01
Behavioural Disengagement	0.02	-0.11	-0.18	-0.14	-0.04
Focus on Venting Emotions	0.15	-0.33**	-0.23**	-0.05	-0.15*
Denial	0.03	-0.07	-0.17*	-0.23**	0.05
Restraint	-0.11	-0.07	0.00	-0.04	-0.02
Humour	-0.04	-0.08	-0.09	0.05	0.05

Note. * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2 tailed).

Relationship between Coping Strategies and Effectiveness of Coping Strategies, Automaticity, Ability to Focus/refocus, Expected/unexpected Stressors and Performance

To assess the relationships between the subscales of the COPE and the effectiveness of coping strategies, automaticity, ability to focus, expected/unexpected stressors and performance a simple Pearsons' correlations were performed at the 0.01 level of a two-tailed test. A correlation was also performed to assess the relationship between effectiveness of coping strategies, automaticity, ability to focus/refocus, expected/unexpected stressors and performance. A moderate positive correlation was found between performance and ability to focus/refocus (r = 0.35, $p < 0.01$) and a moderate negative correlation was found between effectiveness of coping strategies and ability to focus/refocus (r = -0.37, $p < 0.01$).

The correlations between the Coping Strategies within the COPE and the effectiveness of coping strategies, automaticity, ability to focus/refocus, expected/unexpected stressors and performance are displayed in Table 6. A moderate relationships was found between focus on venting emotions and automaticity (r = -0.33). In addition, focus on venting emotions had a weak relationship with ability to focus/refocus (r = -0.23) and performance (r = -0.153). These relationships were significant and negative correlations. A weak negative relationship was found for denial, and ability to focus/refocus (r = -0.17) and expected/unexpected stressor (r = -0.23). Active Coping had a weak positive relationship with ability to focus/refocus (r = 0.16). There were a small number of other weak relationships found (refer to table 6).

Table 7

Simple Pearson's Correlations Examining the Relationship between Anxiety and Effectiveness of Coping Strategies, Automaticity, Ability to Focus/refocus, Expected/unexpected Stressors and Performance

	Sport Anxiety Scale		
	Somatic Anxiety	Worry	Concentration Disruption
Effectiveness of Coping Strategy	0.05	0.21**	0.14
Automaticity	-0.16*	-0.25**	-0.15*
Ability to Focus/refocus	-0.10	-0.26**	-0.26
Expected/unexpected Stressor	0.04	0.04	0.13
Performance	-0.05	-0.17*	-0.06

Note. * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2 tailed).

Relationship between Sport Anxiety and Effectiveness of Coping Strategies, Automaticity, Ability to Focus/refocus, Expected/Unexpected Stressors and Performance

To assess the relationships between the subscales of the SAS and the effectiveness of coping strategies, automaticity, ability to focus/refocus, expected/unexpected stressors and performance a simple Pearsons' correlations were performed at the 0.01 level of a two-tailed test. The correlations between the Sport Anxiety Scale subscales and the effectiveness of coping strategies, automaticity, ability to focus/refocus, expected/unexpected stressors and performance are displayed in Table 7. Weak relationships were found between worry, and effectiveness of coping strategy (r = 0.21), automaticity (r = -0.25), ability to focus/refocus (r = -0.26), and

performance (r = -0.17). These relationships were all significant and while the former relationship was positively correlated, the rest were negatively correlated. A weak negative relationship was found for somatic anxiety and automaticity (r = -0.16) and lastly concentration disruption was negatively correlated to automaticity (r = -0.15).

Sources of Stress

Table 8

Ratings of Generic Sources of Stress During Past Competitive Hockey Games

I worried about:	M	SD	Range
the importance of the game	3.66	0.90	1 – 5
throwing a bad pass, missing the ball or missing a goal	3.40	1.02	1 – 5
what my coach(es) would think or say	3.40	1.00	1 – 5
what my teammates would think or say	3.21	1.05	1 – 5
my abilities	3.19	1.05	1 – 5
not living up to others' expectations	3.16	1.10	1 – 5
how good the opposition were	3.10	0.87	1 – 5
level of competition	3.10	1.00	1 – 5
other players not doing their jobs on the field	2.88	0.88	1 – 5
bad calls by umpires	2.84	1.05	1 – 5
not settling into the game quickly	2.83	0.98	1 – 5
my lack of experience	2.74	1.04	1 – 5
my teammate's marking	2.74	0.98	1 – 5
being under-prepared	2.72	1.06	1 – 5
being dropped from the starting line-up	2.70	1.17	1 – 5
playing alongside highly respected players	2.67	1.10	1 – 5
the extra responsibilities placed upon me	2.65	0.91	1 – 5

coaches' decisions	2.56	1.05	1 – 5
being dropped from the team	2.54	1.18	1 – 5
my hockey career	2.54	1.21	1 – 5
having to sit on the bench	2.42	1.20	1 – 5
injuries	2.37	1.10	1 – 5
my future	2.33	1.24	1 – 5
not fitting into the team	2.32	1.10	1 – 5
getting hurt or injured	2.32	1.13	1 – 5
interpersonal problems within the team	2.29	0.97	1 – 5
work or study hassles	2.17	1.09	1 – 5
my career	2.16	1.17	1 – 5
verbal abuse	2.16	1.18	1 – 5
the condition of the turf	2.12	0.79	1 – 5
weather conditions	2.02	0.84	1 – 5
my financial situation	1.99	1.13	1 – 5
the equipment I was playing with	1.98	0.86	1 – 5
what my parents would think or say	1.97	1.07	1 – 5
family or relationships	1.97	1.00	1 – 5
what was happening at home	1.84	0.88	1 – 5
the large crowd	1.84	0.96	1 – 5
team management	1.80	0.73	1 – 4
the scheduling of games	1.75	0.80	1 – 4
clothing I was wearing	1.66	0.78	1 – 5
my lack of sponsorship	1.66	0.95	1 – 5
the shoes I was wearing	1.64	0.88	1 – 5
competition venue	1.55	0.64	1 – 4
what the media would think	1.37	0.62	1 – 4
the television cameras	1.32	0.61	1 – 4

Table 9

Ratings of Generic Sources of Stress During Past Competitive Hockey Games

Appearing:	M	SD	Range
to not perform up to my potential	3.29	1.04	1 – 5
to not perform technical skills correctly	2.95	1.07	1 – 5
untalented	2.87	1.11	1 – 5
under-skilled	2.86	1.04	1 – 5
to not live up to my expectations	2.84	1.04	1 – 5
fatigued	2.68	1.09	1 – 5
unable to handle the pressure	2.61	1.10	1 – 5
not physically or mentally ready	2.53	0.95	1 – 5
athletically incompetent	2.44	1.03	1 – 5
to lose composure	2.40	0.93	1 – 5
distressed	2.21	0.93	1 – 5
unattractive	1.79	0.88	1 – 5

Sources of Stress to Competitive Hockey Players

The sources of stress identified by the participants, and their means, are presented in Tables 8 and 9. Scores were rated as (1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always). As illustrated in the two tables, there is a large amount of variation in the sources of stress experienced by the participants, as approximately half the standard deviations were large (greater than one). The most prominent stressors experienced included worrying about: the importance of the game, their abilities, throwing a bad pass, missing the ball or missing a goal,

what coach(es) would think or say, what teams would think or say, how good the opposition were, the level of competition, other players not doing their job, appearing not to perform up to own potential, or performing a technical skill correctly.

Participants worried least about: the competition venue, scheduling of games, team management, crowd, presence of television cameras, the media, the clothing or shoes they were wearing, lack of sponsorship, what was happening at home, and appearing unattractive. The finding that participants worried least about television cameras and the media may be due to the lack of, or minimal, media coverage of women's hockey in New Zealand at national level. In general, most of participants' ratings or worry were low to moderate.

Factor Analysis

Factor analyses with oblique (oblimin) rotation were performed on the Sources of Stress Scale (refer to Table 10). Such factor analyses were attempted to identify the factors that represented the most variance for sources of stress. In addition, the factor analyses were used to screen variables for subsequent analysis. Because the Sources of Stress Scale is an exploratory instrument, preliminary statistical evaluation of the suitability of the scale's item correlation matrix for factor analytic procedures was conducted as recommended by Dziuban and Shirkey (1974). Subsequently, a series of principal-axis factor analyses, followed by oblique rotation solutions, were conducted to reduce the data. The oblique rotation was considered appropriate as it was expected that some of the sources of stress would be correlated. An analysis was conducted both on unstandardised data and standardised data, to control for the influence of experience differences (Nunnally, 1978). There were no substantive differences between the results of both analyses, so the results of the unstandardised data are reported.

As recommended by Dziuban and Shirkey (1974) and Pallant (2001), a preliminary analysis was conducted to determine the suitability of the data for factoring. Results indicated that the data was suitable for factor analyses with (a) revealed numerous correlations within the correlation over the recommended 0.3 within the preliminary correlation matrix; (b) item

interdependence suggested by Bartlett's test of sphericity, c2 = 6116.55, *p*< 0.000; and (c) an overall Kaiser-Meyer-Olkin sampling adequacy statistic of 0.86.

Principal-axis factor analyses with direct oblimin rotation were conducted to reduce the Source of Stress scale into a smaller number of interpretable factors for subsequent statistical analyses. To determine the components (factors) to 'extract', the researcher first analysed the Kaiser criterion (eigenvalues > 1) eigenvalues of the components. This initial analysis revealed 14 factors with eigenvalues exceeding 1.0 prior to the direct oblimin rotation, which accounted for 70.50% of the variance. After consideration of Kaiser's criterion (eigenvalue > 1), Cattell's scree test, rotated factor interpretability, and indications of rotated factor viability (i.e., number of items) and independence (i.e., extent of item cross-loading), it was decided that a two-factor solution should be pursued.

After evaluating the scree plot for a change in the shape of the plot, it was evident that components 1 and 2 were of most value. Pallant (2001) recommends that often with the Kaiser criterion, reveals that too many components are extracted. Therefore, she believes it is important to look at the screeplot for changes in the shape of the plot and recommends retaining only components above the change in the plot. An item was retained on the final version of the scale if it had a coefficient display format of lower than 0.40. A direct oblimin rotation with Kaiser Normalisation (Delta, 0) was performed after a Varimax Rotation was unsuccessful. The researcher would have preferred to perform an orthogonal rotation, which minimises the complexity of factors by maximising variance of loadings on each factor (Tabachnick & Fidel, 1996). An oblique rotation, however, was needed to simplify the factors by minimising cross-products of loadings.

A total of 25 items were retained in the final solution for factor 1, and 22 items in factor 2. Examination of the pattern matrix presented in Table 4 reveals an interpretable solution featuring items with strong and unique loadings upon factors. The two-factor solution accounted for 35.51% of the variability among the Sources of Stress Scale items. The factors emerging from these analyses were interpreted as representing concerns about: (a) ability/skills; (b) appearing untalented/underskilled; (c) living up to potential/expectations; (d) handling the pressure; (e) performing technical skills; and (f) readiness.

Table 10

Direct Oblimin Rotation of Two-Factor Solution for Sources of Stress Scale Items

Sources of Stress Scale Item	Factor 1	Factor 2
I worried about my abilities	0.824	
Appearing untalented	0.824	
Appearing to not perform up to my potential	0.809	
Appearing under-skilled	0.797	
I worried about not living up to others' expectations	0.789	
Appearing unable to handle the pressure	0.765	
I worried about throwing a bad pass, missing the ball or missing a goal	0.752	
Appearing not to perform technical skills correctly	0.749	
Appearing to not live up to my expectations	0.747	
Appearing not physically and mentally ready	0.712	
I worried about what my teammates would think or say	0.683	
Appearing athletically incompetent	0.662	
I worried about not fitting into the team	0.661	
I worried about playing alongside highly respected players	0.661	
I worried about my lack of experience	0.651	
I worried about what my coach(es) would think or say	0.611	
I worried about not settling into the game quickly	0.606	
Appearing to lose composure	0.588	
I worried about the level of competition	0.561	
I worried about being dropped from the team	0.559	
Appearing distressed	0.547	
I worried about how good the opposition were	0.542	

I worried about being under-prepared	0.531	
Appearing fatigued	0.529	
I worried about being dropped from the starting line-up	0.529	
I worried about having to sit on the bench	0.520	
I worried about the competition venue		0.609
I worried about the shoes I was wearing		0.606
I worried about my lack of sponsorship		0.593
I worried about the clothes I was wearing		0.584
I worried about what the media would think		0.553
I worried about getting hurt or injured		0.553
I worried about my financial situation		0.544
I worried about the equipment I was playing with		0.532
I worried about family or relationships		0.527
I worried about the scheduling of games		0.527
I worried about the weather conditions		0.525
I worried about injuries		0.515
I worried about what was happening at home		0.501
I worried about the television cameras		0.453
I worried about team management		0.443
I worried about my career		0.435
I worried about my future	0.301	0.432
I worried about my hockey career	0.313	0.431
Appearing unattractive		0.427
I worried about interpersonal problems within the team		0.426
I worried about work or study hassles		0.420
I worried about the condition of the turf		0.405
% of variance explained	27.47%	8.05%

Stressful Experiences

The participants were asked to describe any stressful experiences they had had prior to or during a competitive hockey game. Players were allowed to list as many stressful experiences as they could recall. Participants' written responses were content- analysed, and the most frequent responses are presented in Table 11. It is apparent that there was a large variation in the stressful experiences experienced by the participants, with a great number of stressors being identified. The most frequent responses were: experiences involving umpiring decisions (n = 43); playing with injuries or not being fit to play (n = 31); playing in important games (n = 29); and team conflict or negative team communication (n = 29). The participants indicated that stressful experiences usually were situation specific, but usually occurred during the game (n = 45), particularly at the start of the game, or within 6 hours before the game (n =20).

Participants were asked whether stressful experiences were usually 'expected' or 'unexpected', that is, something they/or their team had planned or prepared for. Overall, 55.7% responded that stressful experiences were unexpected, while 33.9% believed they were expected and had planned or prepared for them. Another 10.3% believed that stressful experiences varied, with some stressful experiences expected and others unexpected.

In general, when confronted by stressful experiences, 25.3% of participants felt challenged by the situation. In addition, 14.9% felt accepting of the situation, 13.2% felt panicked, 12.1% felt the situation was manageable, 3.4% felt threatened, 2.3% lost their confidence, 2.3% felt focused and a further 2.3% felt annoyed.

Table 11

Stressful Experiences Experienced Prior to or During Competitive Hockey Games

Stressful Experience	Frequency
Umpiring decisions	43
Playing with injuries/Being not fit to play	31
Important games	29
Team conflict/Negative comments from teammates	29
Family/personal problems	28
Forgotten or faulty equipment	24
Coaches' behaviour/Decisions	23
Nervousness/Butterflies or upset stomach	23
Pressure to perform/Demands	21
Getting hurt/Injuries	20

Table 12

How Participants' Performance was Affected by Stressful Experiences

How performance was affected	Frequency
Loss of focus/distracted	50
Decrease in overall performance	33
Lost confidence	32
Unable to perform the basics (e.g., give a good pass or make a trap)	15
Lost temper/got angry/frustrated	15
Hesitant in performing skills/intimidated	14
Got upset/annoyed/felt disappointed and depressed	14
Doubted my ability/negative performance thoughts	10
Got stressed about playing/got flustered	10
Made the wrong option/poor decision making	10

Coping Strategies

Table 13

Mean (SD) Scores for the Modified COPE

	M	SD	Range
COPE			
Positive reinterpretation	3.44	0.78	1.00 – 5.00
Active coping	3.08	0.74	1.25 – 4.75
Planning	3.19	0.84	1.00 – 5.00
Emotional social support	2.99	1.00	1.00 – 5.00
Instrumental social support	3.20	0.94	1.00 – 5.00
Suppress competing activities	2.62	0.66	1.00 – 4.25
Acceptance	3.33	0.78	1.00 – 5.00
Mental disengagement	2.35	0.81	1.00 – 4.75
Behavioural disengagement	1.62	0.91	1.00 – 3.50
Focus on and vent emotions	2.52	0.58	1.00 – 5.00
Denial	1.52	0.58	1.00 – 3.75
Restraint	2.67	0.70	1.00 – 4.25
Humour	2.45	0.97	1.00 – 5.00

Coping Strategies

The mean values for the subscales of the COPE are presented in Table 8. As illustrated in Table 13, the most prominent coping strategies used, relative to stressful experiences, were positive reinterpretation (*M* = 3.44 (*SD* 0.78), acceptance (*M* = 3.33 (*SD* 0.78), and instrumental social support (*M* = 3.20 (*SD* 0.94), followed closely by planning and active coping. Least-used coping strategies were denial (*M* = 1.52 (*SD* 0.58), and behavioural disengagement (*M* = 1.62 (*SD* 0.91).

Table 14

What Participants/or Their Team Have Done in the Past to Prepare or Plan for Expected Stressful Experiences

Preparation/Planning	Frequency
Team talk (team)	26
Nothing	25
Fostering team unity/cohesion/supportive environment (team)	22
Positive communication (team)	16
Game plan/tactics (team)	16
Visualisation (individual)	12
Having defined team roles (team)	11
Debriefs – discuss situations/try to prevent them from happening again (team)	11
Open communication – talking/sharing feelings (team)	11
Relaxation (individual)	8
Being organised (individual)	8

Table 15

Use of Strategies During Competitive Hockey Games

Strategies	Frequency
Refocusing – focus on immediate task/concentrate on own game	42
Positive affirmations/positive self-talk	37
Relaxation/centred/breathing	34
Communication (talking)	27
Visualisation	27
Goal setting/focus on game objectives	15
Closure - forget it/park it	14
No strategies	13
Create positive team environment/supportive	12
Focus on the basics/build from basics	10

Use of Strategies

The participants were asked to write down how, in general, they dealt with stressful experiences, for example, whether they used any strategies to help maintain their performance. Such written answers were content analysed, and the most frequent responses are presented in Table 15. As previous results (refer to Table 12) had indicated that performance was most often affected by a lack of focus or being distracted, it is not surprising that refocusing techniques, such as focusing on the immediate task, was the most frequent strategy used by participants. Other strategies included positive affirmations/self-talk, relaxation techniques, communication, visualisation, goal setting, and thought-stopping techniques.

Preparation/Planning for Expected Stressful Experiences

The majority of preparation or planning for expected stressful experiences was done within a team (43.1%), with 21.3% of participants having prepared both as a team member and as an individual. A further 19% prepared individually, and 16.7% failed to plan or prepare at all. Descriptions of what individual participants and/or teams had done to plan or prepare for expected stressful experiences were content analysed, and the most frequent preparation/planning are presented in Table 6. As illustrated in Table 6., the traditional team talk was the most prominent way teams prepared (n = 26). Participants indicated in written responses that the purpose of the team talk was to inspire and focus players for the game. Other ways in which teams prepared for stressful experiences or adversity were through creating team unity, positive and open communication, and having team tactics, game plans, and defined team roles. Individually, participants would visualise, use relaxation techniques (e.g., music, reading, time out) and try to be organised. A large number of participants (n = 25) did nothing to plan or prepare for expected stressors.

Table 16

Linear Regression predicting Effectiveness of Coping Strategies against the Ability to Focus/refocus, Performance, Positive Reinterpretation, Acceptance and Worry

Variable	B	t-value
Ability to Focus	0.35	4.53***
Performance	0.05	0.62
SAS		
Worry	0.14	1.93
COPE		
Positive Reinterpretation	0.06	0.78
Acceptance	0.14	1.71

*Note. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$*

Coping Effectiveness

To establish what variables or a combination of variables, best predicted the overall effectiveness of coping strategies, a stepwise regression was performed. The stepwise regression only included variables that had been significantly correlated to the effectiveness of coping strategies to control for the number of independent variables included. The purpose of such analysis allowed the researcher to identify the variables that uniquely contribute to the prediction. For all regressions presented in the results section, no serious violations were noted in preliminary evaluations of multicollinearity, normality, linearity, outliers, homoscedasticity and independence of residual assumptions. The findings of the stepwise regression found that a combination of the ability to focus/refocus was the main predictor of coping effectiveness. In a statistical procedure such as stepwise regression, the order of entry can influence the importance

of an independent variable (Tabachnick & Fiddell, 1996). To eliminate any statistical biases occurring as a result of the order of entry, validity checks were performed using different entry orders. All validity checks found the same results to confirm the validity of the findings. The ability to focus/refocus emerged as the strongest predictor of effectiveness of coping strategies (refer to Table 16).

The findings of the stepwise regression found that the ability to focus/refocus was the main predictor of the effectiveness of coping strategies. The ability to focus/refocus (B = 0.35, t = 4.53) emerged as the strongest predictor of effectiveness of coping strategies, accounting for 19% of the variance, Rsqd = 0.19, $p < 0.001$; F (5, 168) = 7.65, $p < 0.001$.

Influence of Anxiety on Coping

Table 17

Mean (SD) Scores for the Sport Anxiety Scale (SAS)

	M	SD	Range
Somatic anxiety	1.92	0.55	1.00 – 1.67
Worry	2.44	0.64	1.00 – 4.00
Concentration disruption	1.67	0.53	1.00 – 3.60

The mean scores for the subscales of the Sport Anxiety Subscale are presented in Table 17. As illustrated in Table 17, worry (*M* = 2.44 *(SD* 0.64)) was the most salient, though only moderately high. The present findings are consistent with previous research (Giacobbi & Weinberg, 2000).

Analyses of the relationship of anxiety on coping variables found that positive moderate relationships were found between mental disengagement across the three somatic anxiety, worry and concentration disruption (refer to Table 5), and between focus on venting emotions and

somatic anxiety. A moderate negative relationship was also found for focus on venting emotion and worry. Weak relationships were found between worry, and effectiveness of coping strategy automaticity ability to focus/refocus and performance (refer to Table 7). These relationships were all significant and while the former relationship was positively correlated, the rest were negatively correlated. A weak negative relationship was found for somatic anxiety and automaticity, and lastly concentration disruption was negatively correlated to automaticity.

Performance

Overall, 75.3% of participants indicated that their performance was affected by the stressful experiences they had described. How participants' performance was affected as a result of a stressful experience is presented in Table 18. Written responses were content analysed and the most frequent responses are displayed in Table 18. It is apparent that participants' performance was most commonly affected through losing focus, or being distracted by thoughts involving the stressful experience (n = 50), with nearly a third of the participants being affected. In addition, losing confidence, doubting ability, being unable to perform the basics, being hesitant or poor decision-making were also common ways in which participants' performances were affected. As a result of stressful experiences, participants commented that they would often lose their temper, get flustered, or become upset, which also affected their overall performance.

To establish what variables or a combination of variables, best predicted the performance, a stepwise regression was performed. The stepwise regression only included variables that had been significantly correlated to performance to control for the number of independent variables included. The purpose of such analysis allowed the researcher to identify the variables that uniquely contribute to the prediction. The findings of the stepwise regression found that the ability to focus/refocus was the main predictor of performance. In a statistical procedure such as stepwise regression, the order of entry can influence the importance of an independent variable (Tabachnick & Fiddell, 1996). To eliminate any statistical biases occurring as a result of the order of entry, validity checks were performed using different entry orders. All validity checks

found the same results to confirm the validity of the findings. The ability to focus/refocus emerged as the strongest predictor of overall effectiveness of coping strategies. The ability to focus/refocus (b = 0.30, t = 3.39) emerged as the strongest predictor of performance, accounting for 13% of the variance, Rsqd = 0.13, $p < 0.001$; F (4, 169) = 6.47, $p < 0.001$.

Table 18

Linear Regression predicting Performance against Ability to Focus, Automaticity, Worry and Focus on Venting Emotions

Variable	B	t-value
Ability to Focus	0.30	3.39***
Automaticity	0.05	0.65
SAS		
Worry	0.04	0.46
COPE		
Focus on Venting Emotions	0.07	0.94

Note. *** p < 0.001, ** p < 0.01, * p < 0.05

Qualitative Results

High and Low Copers

The qualitative findings from the high and low cases are presented as case study reports through descriptive illustrations of the participants' experiences. The indented sections are direct quotes from the participants; such quotes serve to maintain the richness of the data. To ensure the anonymity of the participants, the names cited with direct quotes were changed. In the plain text there are also quotes from the participants, but these may have been reworded. Any rewording or illustrations of the participants' experiences have been done carefully to maintain the original themes and ideas. In most cases any rewording was done to enhance the readability and continuity of the findings. Some offensive language is contained in a small number of quotes, but the researcher believed that such language should be retained to protect the authenticity of the participants' comments.

The researcher's interpretations of the findings are also included within the case reports. These interpretations are simply reiterations of the findings. Further comments will be provided in the discussion.

Each of the case reports have been divided into the following sections:

1) Introduction
2) Stressors
3) Coping experience
4) Reaction to stressors
5) Coping strategies/preparation
6) Coping outcomes
7) Personal characteristics
8) Support

The participants involved in the interviews, and whose responses are reported in the cases studies, were purposefully chosen, as they had displayed either a high or low overall coping score relative to the other participants completing the questionnaire. Specifically, two participants, one from the highest and lowest scores on the effective coping item were chosen. These participants were also chosen so they were equivalent in experience. It is assumed that, by nature, those athletes who are able to cope more effectively are able to reach a higher level of competition than those who are unable to cope. Therefore, 'experience' in this study was defined more as years of competitive playing rather than as achievements.

The two participants who displayed the least and the most coping effectiveness were identified but, due to a noticeable difference between the experience of these two participants, another participant who displayed poor coping effectiveness was chosen as well. This additional participant was also comparable to the participant who displayed the most effectiveness in relation to experience, and accounted for any variance due to experience. No other participants were interviewed, due to the limitations of the study.

Case Study One – "Jane" (Low Coper)

Introduction

Jane is a relatively young hockey player in the Senior Women's National Hockey Championships. She was only 17 when she was first selected to play in the senior women's level for her province and this is, in fact, only her second season playing as a senior provincial representative. Jane is not alone as a talented youngster, as there are an increasing number of age-group representatives also representing their provinces at senior level.

Having taken up the sport seven years ago, Jane has had an impressive career in competitive hockey and described as "an up and coming" player. Specifically, she has played and captained at age-group levels, represented Central Districts at under-21 age group, played at senior women's level, and been selected in age-group development squads where she has received expert coaching.

Jane's preferred position is at fullback. However, for age groups, where Jane is one of the most experienced players, she often plays a more pivotal role in the team as centre-half. Jane is very committed to hockey, and believes that last season she trained extremely hard to try and achieve her goal. In particular, her short-term goal for last season was to be selected for the New Zealand under-18 team trials, with her long-term goal being to play for New Zealand Senior Women's team.

After not achieving her short-term goal last season, Jane was absolutely gutted. She felt she focused too much on selection, and over-trained, and believes the pressure she put on herself to achieve her own expectations made her not enjoy her hockey, and actually made her play worse. Though she is very disappointed with her last season, she feels that she is still ready for new challenges and is prepared to work even harder to realise her dreams.

Jane was chosen to be interviewed as she reported the lowest level of coping skills on the questionnaire relative to fellow players at the National Hockey Championships.

Stressors

> *Expectations.* "Own expectations. It was built up to me throughout the year by hockey counterparts that I would get a New Zealand trial [under-18 age group] and I was told week in, week out, that the selectors were really pleased with the way I was playing, so I came to expect that I would get a trial. Basically, up until a month ago my short-term goal was to get a trial. Throughout this year, when the pressure has been on, my own pressure to get a trial, I've played worse. My ability seems to drop and I'm not enjoying it as much. After I found I didn't get a trial I was gutted."

> *Pressure to Perform.* "I feel a pressure to perform. There is not much leeway for having bad games, even performing poorly at training. Playing to a reasonably high level automatically includes a hidden pressure that you have to play well all the time [Others' expectations]."

Others' Actions (Comments). "If someone is yelling at me from the sideline or on the field, telling me what to do or something, it firstly makes me defensive straight away. I keep thinking 'you shouldn't be talking to me'. I want to tell them to shut-up like 'shut-up' 'shut-up', then I tell myself 'don't listen Jane', 'don't listen Jane', but then the words stick with you and I think maybe I should be doing what they say, maybe I should listen. If it is a teammate telling me 'Oh, that was useless or stupid' then I will actually take it to heart almost. Like, I've always been at the top, like the captain of school or under-18s, so I'm the one trying to give advice. So people don't actually talk to me about what I'm doing, so it's hard because no one is perfect, especially me. Or in Senior Women's I was one of the worst players [and youngest]. So, if someone tells me that was a 'shitty pass', they are the ones who are better than me so then I will really listen and think 'Oh that pass must have been bad' because that person is more experienced than me, or older or better so they must know more than me."

Conflict. "When there is negativity in the team about anything really, hostility between personal opinions or problems, which causes backstabbing and that sort of thing. I'm sure it happens more in women's teams than men's teams. But it's just negativity you should leave out of the tournament. It reflects on the field. You can tell people's personal opinions as it is all in their body language and that on the field."

Bad First Touch/Mistake. "A bad first touch or making a mistake usually affects me for the rest of the game or half. Good first touch is a crucial one for me as I find it hard to pick myself up again if I make a mistake early on. That is my biggest weakness — my confidence. I'm outwardly confident but playing against women, I just lost it completely. I had a really bad tournament, freaked myself out, and convinced myself that I was so much weaker than everyone else and they were all going to dick on me. So then I got tentative and my game went, so I played badly and my coach took me off more, which didn't help. It was just a vicious cycle."

Researcher's Interpretation of Stressors. Several stressors cause Jane to doubt her ability, experience stress, and these influenced her performance. These stressors came from general sources, resulting largely from Jane's own perceptions. It was evident throughout the interview that expectations — both her own and those of others — caused Jane stress.

It was clearly evident that Jane placed a great deal of pressure on herself to achieve success within her sport. Indeed, Jane had played well in the previous season and the knowledge that she had the potential to make the New Zealand Under-18 trial heightened her expectations for the current season. Such pressure appears to have been detrimental to her performance, confidence, and enjoyment of the game. Jane said it best herself, when she stated "throughout this year when the pressure has been on, my own pressure to get a trial, I've played worse".

In addition to her own expectations and the pressure she places on herself, Jane also experienced stress as a consequence of her need to impress others. Specifically, this was reflected in the pressure she felt to live up to other peoples' expectations. She felt that, as a representative player, other people expected her to perform well and that there was little leeway for having a bad game.

Other players' actions greatly affected Jane's confidence. Although the actions of others were outside of Jane's control, she still allowed these external factors to affect her. In particular, Jane was really affected by others' comments about her play. Although Jane often got defensive about such comments, she internalised them. Specifically, she struggled to let go of such comments and was unable to get them out of her head. In addition, negative feedback from others, more experienced, players also contributed to Jane's lack of confidence and tentative play. As a relatively inexperienced player at senior level, Jane seemed to be struggling with the adjustment. It was not only affecting her confidence, where she doubted her ability, and experienced negative self-talk, but it dramatically affected her performance. Indeed, Jane had always been one of the best players at junior level, where she had stood out as a performer.

Being one of the less-experienced players was hard for Jane. She didn't receive the same positive reinforcement from others, and expressed feelings of inferiority and not being good enough. For example, when an another player told her that she had not passed well in a team

where she is one of the less experienced, she automatically doubted her ability, because she feels that they are older, more experienced, and know more than she does.

Lastly, when Jane's performance did fall off, she was unable to cope and regain her composure and game. Specifically, she believed that a good first touch was crucial to her game, especially as she viewed her confidence as her biggest weakness. Jane believed that if she had a bad first touch she would find it hard to pick herself up. She thus displayed an inability to cope, specifically showing a lack resources or strategies to re-appraise or cope with the situation.

In summary, Jane cited a number of different stressors that caused her to place unnecessary pressure on herself, to doubt her ability, and to suffer from low confidence. Although a number of the stressors were related to external factors outside her control, such as expectations from others, the effects of these stressors were mainly related to Jane's own perceptions, negative thoughts, and irrationalisations.

Coping Experience

Lack of Knowledge. "No real experience, never been taught."

Ignoring Stressors. "Mostly I just try to ignore it [e.g., others comments' or team negativity]. I find that it is hard to deal with at the time when it happens to you, but it is worse at night. Later that night I think about it and think 'God, that was really mean', or 'I can't handle that' or 'that really distracted me' and get a bit down about it. But I don't really have a strategy that I've found that works for me, though I haven't really tried anything."

Seeking Emotional Support. "Find talking to people helps, even if it is just friends and family, things like that, or teammates. I think it is just the comfort that they share the same opinion, or think it is unfair, or get someone's else's view that I'm being unjust or whatever".

Researcher's Interpretation of Coping Knowledge and Experience. It was evident that Jane's lack of ability to cope was due to a lack of knowledge of effective coping resources. Specifically, she innately used two coping strategies. These included ignoring the stressor and seeking emotional support. Ignoring stressors is avoidance-focused, and can be used to deal with external stressors that cannot be controlled by the player, helping them concentrate on the controllable factors of the situation, such as in Jane's situation. Seeking emotional support is emotion-focused as it focuses on regulating emotional responses.

Such strategies are only short-term strategies and fail to prevent such situations occurring again (Roth & Cohen, 1986). Seeking social support can be a very effective coping strategy, especially when it is instrumental, for example, seeking advice from a coach on how to deal more effectively with a stressor, and developing strategies to use. Although emotional support can be effective at regulating emotional responses and venting emotions in the short-term, the problem could be encountered again.

In summary, Jane used two specific coping strategies, which were ignoring the stressor and seeking emotional support. Ignoring the stressor was an avoidance-focused strategy. Past research has found that avoidance-focused strategies can be effective over the long-term if used in combination with problem-focused strategies, but they are commonly used separately. Consistent with previous research, Jane predominantly used avoidance-focused strategies in isolation, although she sometimes used them in combination with an emotion-focused strategy, such as seeking emotional support. Although Jane used the strategies effectively to deal with factors outside her control, such strategies may only offer short-term solutions (Roth & Cohen, 1986).

Reaction to Stressors

> "For example, if someone is yelling at me from the sideline, I'm defensive straight away. I think ' you shouldn't be talking to me'. 'Don't listen Jane'. Or if it is a teammate I take it to heart, get down. Also, if forget my mouthguard or something I can't stop thinking about it. 'Oh my god, oh my god, I'm going to get hit in the teeth.' Completely distracted.

A bad first touch affects me for the rest of the game. I find it too hard to pick myself up from that. I need a good touch because my confidence is my big weakness. When I have a bad game or tournament, I lose it, perform really badly, even convince myself that I'm useless and weaker than others. Freak myself out."

Perceptions of Reactions. I reckon it is not beneficial to my game to listen to others [negative comments] as it doesn't help me. I try to ignore it but often can't, and end up continuing to think about it. I know I should be concentrating on the game. Even if what I've done is wrong and what they have said is right, it doesn't matter, it has been and gone, it happened and I shouldn't take any notice of negative comments and should be concentrating on the game and the task at hand. I want to say 'Hakunamatata'…'It's happened, it doesn't matter, just get on with it, you've forgotten it, you'll remember, learn from it, it won't happen again', that kind off thing. It's not beneficial to worry about it. Something can't really control. The way I deal with, or actually don't deal with, a bad first touch is not effective at all or beneficial. Basically, it is not beneficial, as it is one bad touch out of multiple touches in the game and it shouldn't affect things in the grand scheme of things. Or shouldn't at least affect the rest of my game. I do try on the next touch to do well but trying extra hard can sometimes not be effective either as I try too hard.

Researcher's Interpretations of the Reactions to Stressors. It appears that, when confronted with a stressor, such as negative comments from others, Jane automatically becomes defensive. Often defensive behaviour implies that an individual finds such situations difficult to deal with and is unable to cope. A secondary reaction to negative comments from others was to "feel down". Indeed, such negative comments by others negatively influence Jane's thoughts and feelings greatly. A common theme to Jane's reactions relates to cognitive content, i.e., what is Jane telling herself about such comments that makes her react this way? Although, she realises that it is not beneficial to listen to the comments of others, she is unable to ignore such

comments. Continual thoughts about such comments influence her mood, confidence, concentration, and overall performance.

Jane is aware that the comments of others are outside her control, and she would like to "just get on with it", forget it and move on. However, she is unable to control and stop such negative thoughts. In another stressful situation, when she has forgets a piece of equipment (e.g., mouthguard), she is continually thinking about the negative consequences (i.e., getting hit in the teeth) of such actions (i.e., playing without a mouthguard).

Jane does use self-talk to try and deal with such thoughts, but her use of self-talk is ineffective. For example, in the first quote Jane tried to use self-talk to ignore the comments of others, but such self-talk was negatively framed (i.e., 'don't listen'*)*. Such self-talk is counterproductive as, in essence, it causes her to focus on listening. Self-talk should be positive and reflect what the individual should be doing, instead of what they shouldn't.

Furthermore, Jane acknowledges that her confidence is currently a central cause of the performance problems she has been experiencing. Indeed, when she makes a mistake, although she knows that it is one touch out of numerous touches throughout the game, she allows it to affect her for the rest of her game. Talking to Jane, it is evident that she knows that she should focus on the ball and on performing the basic skills, but during the game she is unable to do so and often "loses it" and doesn't recover from a mistake or bad first touch. Such inability to let go of mistakes is, as Jane states, related to her confidence and her cognitive content. Specifically, Jane stated she "convinces" herself that she is "useless, weaker than the others" and "freaks herself out".

It is clearly evident that Jane's inability to react positively to stressful situations influences her thoughts and feelings greatly. Particularly, Jane experiences negative thoughts and self-talk that she is unable to control. Due to a lack of confidence, she tells herself that she is useless and weaker than the others. Jane would greatly benefit from cognitive restructuring and thought-stopping techniques.

Coping Strategies/Preparation

Visualisation. "I sometimes like to try to visualise myself doing a good drag, or back and around, over and over and over again, so I can sort of imagine myself doing it so I can get used to the idea of doing something good. Usually I do visualisation at night, sometimes before and after the game. Or for our school team we always did visualisation in the team talks, and that was really good, that really helped me. Our coach would give each person two things to think about specific to their goals or roles. We would all lie down on the ground or changing-room floor, get relaxed and imagine ourselves doing those two things or just use the word, whether it was confidence or something. But it is hard to do that if it is just you. Also particularly if I have a problem with a part of my game, or with new set plays. I imagine myself doing the move perfectly and repeat it over and over in my head imagining me doing it right!"

Humour. If it is a really big game, I try to joke a bit to ease the pressure. You know, have a laugh or something. Relieve a bit of tension. Lighten the mood if feel getting too anxious plus it temporarily takes my mind off hockey.

Researcher's Interpretations of Coping Strategies. Jane used three coping strategies. Specifically, visualisation and cue words were considered as both problem-focused and emotion-focused, because they focused on regulating emotional responses, such as increasing confidence, hence helping solve the problem and enhance performance. Goal setting was seen as an active coping strategy (problem-focused) as was humour (emotion-focused). The problem-focused strategies (visualisation, cue words, and goal setting) were often used in combination (e.g., "Our coach would give each person two things to think about specific to their goals or roles. We would all lie down on the ground or changing room floor, get relaxed and imagine ourselves doing those two things, or just use the word, whether it was confidence or something".) As previously stated, visualisation was utilised as a tool for enhancing confidence and skill acquisition (e.g., "I visualise myself doing a good drag, or back and around, over and over and

over again, so I can sort of imagine myself doing it so I can get used to the idea of doing something good. If I have a problem with a part of my game or with new set plays, I imagine myself doing the move perfectly and repeat it over and over in my head imagining me doing it right!") Therefore, visualisation was found to be adaptive and useful strategy, as it was used in combination with other strategies and across different situations. Humour (joking) focused more on avoiding the stressors than on solving the problem. It was concentrated on regulating emotional responses (i.e., to "relieve a bit of tension"). Indeed, emotion-focused strategies are useful for short-term relief, but they don't guarantee that Jane won't experience tension again as a result of a certain stressor.

In summary, Jane utilised three coping strategies. Visualisation was the most salient strategy and was often used in combination with cue words and goal setting. Predominantly, the coping strategies were used to enhance confidence and regulate emotional responses (i.e., release tension).

Coping Outcomes

> *Automaticity of Responses.* "Joking is automatic. I think about it after the game and think 'Oh my god I shouldn't be talking about that. I should be concentrating'. Visualisation, is… comes automatically if I'm already thinking about hockey. I won't sit down and go 'OK, I'm going to visualise' but say I'm talking to a friend about 'Oh yeah that didn't work' it will just happen then. I have to be talking about it or thinking about it already before I can see myself doing anything or planning about what I'm going to do in the next game."

> *Effectiveness of Coping.* Visualisation is, I think, effective. Joking probably isn't that effective. I actually believe it isn't that beneficial because it takes my mind off the task. Even though I may be getting quite nervous and anxious and things like that. I think maybe it is better to keep my mind focused and stay in tune with what my job is. I mean,

> I'm sure visualisation helps, I'm pretty positive it would, you feel a lot more confident before going into a game if I've visualised before.

Researcher's Interpretations of Coping Outcomes. Jane found that the coping strategies she used were beneficial, though sometimes limited in their effectiveness. Jane felt that the coping strategies came automatically to her, although she didn't practise them. From Jane's quote above, joking appears to be almost like a nervous reaction to release tension. In addition, Jane tends to visualise when it comes to her (i.e., thinking about hockey) rather than practising or performing the technique at set times.

In terms of effectiveness, Jane believed that, although joking relieves tension, it is ineffective as it takes her focus off the game. She believes focusing is more important to her performance. Indeed, by joking with other players Jane was, in effect, ignoring (avoiding) the stressor, rather than removing the concern. Given that Jane was avoiding feeling tension, her attention could easily be drawn back to the stressor that was causing such tension again. Although somewhat uncertain, Jane did feel that visualisation was effective, particularly because it made her feel more confident before going into a game.

Personal Characteristics

> "Personally, for me, I find talking to people helps, helps me cope. Even if they don't share my view, it still helps. If I keep it bottled up that doesn't help me cope. Sometimes (more non-hockey related) I'll actually literally write a list of pros and cons, dos and don'ts, about the situation and what I should do next time. That helps because it is a materialistic list, so then you can weigh it up. My family talk a lot so that helps dissect things, so that is good. That's a help and I have a lot of really close friends, you know, talk about anything friends, so that helps. Right now I need a confidence boost. After not making the trial, I was pretty gutted. Here was little Jane trying to be an up-and-coming hockey player, with the big people up there telling me I was doing really well and the selectors were impressed. I was really pleased and proud of myself during the season and

> thought I was doing OK. But… I guess I was really disappointed because it was my goal this year and I felt like a bit of a failure, because this is the first season that I've actually written down a goal and kept the bit of paper to say I would get the New Zealand trial this year. I was quite gutted. I cried quite a bit."

Researcher's Interpretations of Jane's Personal Characteristics. From talking with Jane, it was evident that she was an intelligent, outwardly confident, and outgoing individual. A naturally talented hockey player, Jane has struggled this year with the disappointment of not achieving her major goal for the season. Such a disappointment has led to feelings of inadequacy, self-doubt, and a lack of confidence in her ability as a hockey player. These implications have had a detrimental effect, both on Jane's enjoyment of the game and on her overall performance. Implications for applied sport psychology should be to emphasise the importance of managing players' expectations and setting realistic goals. In particular, when setting goals, players should avoid setting goals for factors outside of their individual control (e.g., selection).

In addition, a lot of Jane's self-doubts and lack of confidence relate to cognitive content (i.e., negative thoughts). Indeed, it is evident that Jane internalises a lot of her feelings associated with negative comments from others, her own self-doubts, and lack of confidence. In order to deal with stressors, Jane predominantly seeks emotional support.

Support

> "My main emotional support people are my friends and family. For hockey-related support I would turn to other players who play my position, and my coach. It helps when coaches come and have a chat individually and that sort of thing. You know, say 'you seem to have problems with this' or' you didn't seem to happy about this. Can I offer any solutions?', or that sort of thing. One-on-one relationship with the coach is always good. It makes you feel special or important to the team, as an individual and not just a number."

Researcher's Interpretation of Social Support. Jane's core support is from her family and friends, who she views as a good place for venting emotions. For instrumental support, Jane turns to other players or her coach. Indeed, she values one-on-one feedback from coaches because it makes her feel like a valued member of the team, and feels that she can get some specific advice on areas where she needs assistance.

Case Study Two —"Sarah" (Low Coper)

Introduction

Sarah described herself as a capable player who has been involved in competitive hockey since she was seven. Her experience is evident, as she has played provincial level hockey for the last 24 years, with 17 of those at the Senior Women's National Championships. A keen hockey enthusiast, Sarah enjoys coaching age-group representative teams, umpires regularly and is on the competition committee for her association.

Although Sarah confesses that she isn't really inspiring to anything, she still enjoys playing at competitive levels. Once she aspired to be a New Zealand hockey player, but now she is at a stage where she doesn't aspire to anything great. Her defined goal is now simply enjoyment. Sarah holds the perception that it is extremely hard for small provinces to produce elite level players, and some time ago decided it was a waste of time aspiring for higher honours. Specifically, she felt it was in the "too hard" basket, and she wasn't committed to putting in the training.

In addition, Sarah believes that she gets extremely stressed at times, and her inability to cope has at times inhibited her ability to perform. Even now, after years of experience, Sarah believes she still is unable to cope effectively at crucial times. Sarah was chosen to be interviewed as she reported a low level of coping skills on the questionnaire relative to fellow

players at the National Hockey Championships, and had similar levels of competitive hockey experience to “Megan” (Case Study Three), who reported the highest level of coping skills.

Stressors

Other Commitments. “Even before I step onto the field I feel stressed due to other commitments within hockey (e.g., on competition committee etc). I know that the association won’t run without people like me, but other people often stress you with queries and niggles about the running of the competition while you are down at the grounds, even when you are trying to prepare for a game.”

Important Games/Tight Games. “Before representative games I get really nervous, and big games, the ones I know that we can win. You know, important games. Also, if a game is tight, like 1-all in the last 5 minutes, then my decision-making goes completely out the window. It comes from the desire to win and wanting to win. The pressure of it all, especially in big games. Knowing we can do it but doubting ourselves, as nothing ever seems to go right.”

Other Players’ Actions. “Positional stuff can cause stress, as I play sweeper. Often I get put under pressure when players such as inners etc., aren’t doing their marking role. Because there are unmarked players in the circle it makes life very difficult for me, very stressful. Another thing this year was that we had a young, quite experienced, goalie, definitely put more pressure on me, as I didn’t have the confidence in that player. Also, other people in the team do stress me out too. Like people being late really stresses me out. I get annoyed as these people, who want to play the game and have made a commitment to be there, but let the team down. I’m a little more serious than that so I don’t appreciate people who don’t make an effort to be there on time.”

Researcher’s Interpretations of Stressors. Several stressors affect Sarah. These stressors came from general sources, resulting largely from external pressures. It was clearly evident that

Sarah was committed to playing hockey, believing that joining a team for the season means making a commitment to that team. Indeed, she takes her hockey very seriously and gets frustrated when people let the team down by not showing the same commitment that she does.

Other players' actions greatly affected Sarah's reactions. Although the actions of others were outside of Sarah's control, she still allowed such external factors to affect her. In particular, a number of stressful situations before the start of the game contribute to her stress. Specifically, when other players are late (again referring to a lack of commitment) it really *"annoys"* her and *"stresses her out"*.

Indeed, it seems that Sarah is easily distracted before the start of the game and has an inability to focus properly before the game. For example, Sarah gets stressed out before a game, as she often gets queries about the running of the competiton (because of her role on the competition committee for the association). Such problems are not uncommon, and she often feels distracted and stressed before the game because other people disrupt her pre-game preparation. In addition, Sarah feels that, when other players are not performing their role, within the team it places a lot of pressure on her to perform, which contributes to feelings of apprehension and stress.

It is clearly evident that Sarah experienced symptoms of anxiety before the game. Specifically Sarah felt that she "gets really, really stressed before a rep. game", particularly when it is an important game and she knows that they can win. Sarah believes her nervousness and stress come from "the desire to win and wanting to win. The pressure of it all, especially in big games". Stress is the perception of an inability to meet the demands of the situation.

Even when Sarah knows her team can win the game, she experiences some level of stress, indicating, and as illustrated in several other comments, that Sarah may be trait anxious. Indeed, such stress could also be a manifestation of either the importance of the game (i.e., it is evident that Sarah takes hockey seriously, thereby increasing the meaning of the situation to her) or due to underlying self-doubts. Indeed, it is well documented that the importance of the game greatly influences stress levels. In this case it appears to be a combination of both self-doubts and the importance of the game. For example, in what appears to be a contradictory statement, Sarah expressed her self-doubt at achieving the outcome she so greatly wanted, in the following

comment: “knowing we can do it but doubting ourselves as nothing ever seems to goes right”. Underlying this statement is the old adage “if you believe you can’t, you won’t”.

Sarah’s pessimistic attitude (resulting from negative thoughts), doubts, and the pressure she places on herself (i.e., through her own desire to win) contribute to her experiencing anxiety, stress, and her poor decision-making. Specifically, Sarah believes she has an inability to cope (i.e., unable to make appropriate decisions) when she is in tight situations (e.g., game is scored 1-all with 5 minutes to go). It could be assumed that Sarah is over-aroused, thereby affecting her decision-making.

In summary, Sarah experienced a number of stressors, which caused her to become anxious, feel pressured, and doubt the ability of the team, and resulted in poor decision-making. Although a number of stressors were caused by the actions of others, which were outside her control, Sarah would let others distract her and often felt pressure from, or got at by, such people.

Coping Experience

Lack of Experience. “I don’t really have any [knowledge or experience]. I know that if I get really stressed I end up in tears, and that can happen on the field. I get really grumpy and angry and I know I don’t cope with umpiring decisions, because I umpire myself. I know I get angry etc. It affects my own play because it gets under my skin and I make really bad decisions, like off-loading the ball and stuff. And that affects the team and our performance, because it often sparks from someone and it get passed on throughout the team and we lose the plot.”

A Limited Knowledge. “I know a little about positive self-talk and visualisation from teachers’ college, but I don’t use it. Actually I do visualise me doing my job properly, off-loading the ball to where I want it to go, making the right decisions. Try to have some time-out by myself.”

Researcher's Interpretations of Coping Experience. Sarah lacks the knowledge or experience of how to cope. Interestingly initially, instead of describing her experience at coping, she in fact described her reactions, and demonstrated her inability to cope. Although Sarah had learnt a little about visualization, and used it for visualising her doing her job properly, off-loading the ball where she wanted it to go, making the right decisions (enhancing confidence), her knowledge was limited. Surprisingly, even with 17 years' experience at playing at an elite level, Sarah still hadn't learnt to cope with stressful situations.

Reaction to Stressors

> "Often before the game I will get really nervous, like butterflies in my stomach (mainly for important games), needing to go to the toilet all the time, like toileting right when you are trying to warm up and that sort of thing. Basically, for the first 10 minutes of the game I'm highly stressed and can't breathe and stuff, and then I'm fine, begin to settle in. I feel like I'm running on adrenalin initially. If a game is tight I really suffer from tension, which is that desire to win and the nervousness about wanting to win and trying to make or hope everyone is doing their job properly. When I have to make a decision quickly, I know I stop breathing, and often make snap decisions. Can overreact, for example in pressure situations. I get really frustrated and abuse the umpire. When really nervous I try to talk to myself [self-talk], especially if I've made a mistake, because usually the next time I go into a tackle my mind goes blank. Generally, when I'm stressed I panic (fright), I'm not calm, and I choke. If I do stuff up I know that in the next 5 minutes I need to calm myself down. For important games, I put so much into the build-up it becomes personal, even to the point that I've cried about it."

> *Perceptions of Reactions to Stressors.* "Don't feel my responses are beneficial, as it leads to play that involves bad decision- making. It's not constructive. Often, it's panic-type hockey, like 'Oh I've got the ball so quick, off-load without thinking'. It doesn't help the

game any. I only cry if I'm really, really stressed out, so that isn't very often. However, I usually become quiet, withdrawn, stop talking. This is in relation to any stressor. I'm sort of thinking 'You're stupid, why did you do it, you know you are under stress, why didn't cope better'. I need to take some time out, maybe only 2-5 minutes, depending on how the game is going. On one occasion I did lose the plot totally and had to go off. Playing the top team of the competition. I remember the first touch I made went completely the wrong way and then on the next touch a goal was scored in their favour and I just couldn't work myself out of the hole I was in. Every time I touched the ball nothing would go right. I asked to be taken off at half-time because I couldn't cope and got *told 'NO'. I needed some time, we were hard on defence most of the time and I didn't really have time out to refocus. It just got worse and worse. I know that this situation was hardly ideal and wasn't beneficial to me or the team."*

*Researcher's Interpretations of Reactions of Stressors.*_Sarah usually experiences nerves or physiological symptoms of anxiety like "butterflies in her stomach" before a game. However, when it is an important game, she becomes excessively nervous, such as *"really, really nervous"*, and experiences symptoms like the frequent need to urinate during pre-game preparation.

In addition, it takes Sarah approximately 10 minutes to settle into her game. During this time she feels highly stressed, and unable to breathe, and experiences an over-active sensation, such as "running on adrenalin". Although Sarah is able to settle into her game after 10 minutes playing, she can be easily unsettled again. In particular, she has the potential, when she perceives the umpire to be incompetent or experiences a perceived unfair decision, to become frustrated and even abusive towards the umpire. In addition, in tight situations Sarah believes she suffers from tension caused by "wanting to win" and "hoping everyone is doing their job".

While suffering from tension and pressure situations, Sarah tends to panic, isn't calm, and often "chokes". When this occurs Sarah plays what she refers to as "panic-type hockey", where she is unable to make good decisions, often stops breathing, her mind goes blank and, when she receives the ball, she tries to get rid of it immediately (panic). She is aware that, to regain her

composure, she needs to calm herself down and to avoid further consequences, such as crying. She also admits that, when things are not going right, she tends to withdraw, goes quiet and takes some time out (2-5 minutes).

Sarah is aware that her inability to cope in stressful situations is not beneficial to her game, as it leads to panic-type hockey, and poor decision-making, and is also detrimental to the team's performance, because of her inability to perform and overreact. In addition, she experiences negative thoughts and tells herself "You're stupid, why did you do that, you know you are under stress, why didn't you cope better". If things become too much, such as situations where she is really, really stressed, Sarah will even cry. On a rare occasion when she did suffer from an inability to cope, Sarah refers to a situation where she "lost the plot and had to go off". In that situation she believed that every time she touched the ball nothing would go right. She wanted to go off but wasn't allowed, couldn't have any time out to refocus because she was continually hard on defence (under pressure), had asked to come off but wasn't allowed by the coach and, in the end, was forced to come off because she really couldn't cope.

Coping Strategies/Responses

> *Visualisation.* "I do visualisation before the game and then I often do it again at half time. I visualise myself doing my job properly, off-loading the ball to where I want it to go, making the right decisions."
>
> *Self-talk.* Remembering to breathe, like in that first 5 or 10 minutes. I try, and I know that it's happening [not breathing], and I know I'm nervous but I try and talk to myself. I say to myself 'just breathe'. Also, when I go into tackles I think about where I am going to put the ball when I get it, get down low, being hard, 'Go low and hard'.
>
> *Communication.* I try to talk in the first 5 minutes, like talking to the team, which is good because the whole team reacts positively. When I mean talking, I mean informing other

players things like the lines they should be running, if a pass is on, where their man is that they need to be marking, if on defence give positional advice.

Time Out. Removing myself from the situation. Try to have some time out by myself.

Researcher's Interpretation of the Coping Strategies. Jane reported a number of different coping strategies that included visualisation, self-talk, breathing (relaxation), positive communication, and time out (removing herself from the situation). Most of the strategies were focused on coping effectively with the situation (i.e., trying to relieve or prevent the stressors from occurring), whereas time out was focused on avoiding the stressor, rather than dealing with the problem.

Self-talk was used in combination with breathing and was more instructional and technical than motivational in nature (e.g., reminding herself to breathe or focusing on tackling technique). For example, when Sarah identifies that she is nervous (awareness of arousal levels) she tries to focus her attention on her breathing ("I know I'm nervous but I try and talk to myself. I say to myself 'Just breathe'.") In addition, to assist in tackling technique, Sarah thinks about where she is going to put the ball when she gets it, get down low, being hard, and says to herself "Go low and hard".

In addition, Sarah uses visualisation to help go over set moves (technical aspects of the game) and to see herself "making the right decisions" (enhance confidence). Specifically, she uses visualisation before and during half-time. In addition to self-talk, Sarah also uses positive communication to help the team. For example, the types of things she would communicate on were "informing other players things like the lines they should be running, if a pass is on, where their man is that they need to be marking, if on defence give positional advice". Sarah particularly likes to use this strategy in the first 5 minutes and believes that when she does the team reacts positively. In addition, this strategy also helps prevent Sarah from experiencing stressful situations (e.g., pressure due to other players not performing their marking role). These strategies were classified as problem-focused and tried to effectively relieve or prevent stressors.

Among the strategies, time out (removing from the situation) is categorised as avoidance-focused. Sometimes removing yourself from the situation, as in competitive sport, is not an option (i.e., hard on defence, as illustrated above). In terms of effectiveness this strategy doesn't solve the problem or help the player cope better with the situation. However, avoidance coping can be a useful technique, for example, walking away from an umpire when a perceived unfair decision is given. But despite such usefulness it is only a short-term relief. Throughout the interview Sarah frequently referred to the use of this strategy.

In summary, Sarah reported using a number of strategies that were mostly based on approach-focused coping strategies. Such strategies are viewed as being more effective over the long-term than avoidance-focused strategies (Roth & Cohen, 1986).

Coping Outcomes

> *Automaticity.* "Normally automatic, but when it gets really bad I do have to consciously think about what is going on. I probably go 'Oh my god, this is bad' and then go 'OK, let's deal with it, we know how to deal with it'."

> *Effectiveness.* "Normally effective. There is the odd occasion they don't work. But when it doesn't work it is usually because of outside influences, e.g., I'm tired, sick, shouldn't be there, my head is not there. Find self-talk really good, in terms of if I've stuffed up a tackle really badly. In terms of that I break it all down, so I know what I have to do next time. I know how to do it, so use reminders of what to do. Communication is effective because it makes it easier on me. For example, giving direction to my team mates can help a lot. Say play has broken down, they have scored a goal, and then we find ourselves on defence again. I'm on defence. I find if I talk and tell others where to go it puts me in a more positive place for the next time, so I think, they've got there, they've got there, then I'll go here. Which is effective at reducing the stress as we have things covered more, less open to attacks."

Researcher's Interpretation of Coping Outcomes. Usually Sarah found her coping strategies came automatically. However, when she was really stressed she had to consciously think about what was happening. Her initial appraisal of the situation is often "Oh my god, this is bad", then she re-appraises the situation as "OK, let's deal with it, we know how to deal with it".

Sarah found that her coping strategies had several benefits, which were normally effective for dealing with her stressors. However, she did add that on the odd occasion they don't work. But she attributed this lack of success to her own personal feelings and circumstances (i.e., "When I'm tired, sick, when I shouldn't be there, my head's not there.").

Sarah perceived that self-talk was particularly beneficial for correcting technical problems in her game. For example, Sarah stated that if she had "stuffed up a tackle really badly", she would break it down (identify the problem) so she would know what to do next time. To help prevent herself from making the same technical fault, she would use cue words as reminders of what to do in the next tackle.

Sarah had identified the benefits of positive communication. Through communicating effectively with her teammates (i.e., constructively instructing them where to be in order to have defence covered) she realized this makes it easier on herself and "helps a lot". In particular, Sarah acknowledges the benefits of having a pro-active strategy, as it lowers the stress she experiences. She feels more confident that they have the defence covered and are less open to attacks by the opposition.

This is important, because Sarah is taking direct action to control her arousal levels (decreasing the symptoms of stress), and reducing the pressure she is under by managing the situation (i.e., ensuring that the team works effectively together). However, this strategy is reliant on Sarah being able to communicate effectively. Previously she has identified that when things aren't going right she can withdraw and stop talking. Therefore, her ability to cope is based around how she reacts to stressors once they have occurred and whether she is able to do something constructive at that point.

In summary, Sarah reported several benefits from her coping strategies. By using cue words, Sarah was able to correct problems in her technique which were influencing her performance, by reminding herself what to do in the next tackle. By communicating effectively

Sarah was able to avoid becoming stressed and to manage the situation to reduce the pressure she placed on herself.

Personal Characteristics

> "The factors that are effective in helping me cope are the people who are around me. I know that my parents helped me a lot to cope with the stresses of hockey when I was younger. This year, my partner has helped me, because I've been stressed at work. I tend to use the people around me for support, to rebound ideas off (and I do that a lot in hockey). It's good to have a sounding board. In addition, if I know I have a weakness, e.g., making mistakes when physically tired or not hitting well, I will go down to the turf on my own and do extra physical preparation, such as sprint training. Umpiring annoys me. We often get stuck with the bunnies who are not up to it. There are times when feel being got at, so have got frustrated. A circumstance that has led to me to not cope recently was personal. Personally for me one of the biggies was my mother dying. For that whole season, it was a personal thing that she wasn't there."

Researcher's Interpretations of the Participant's Personal Characteristics. To help her cope with stressful situations Sarah turned to the people around her for instrumental support. When she was younger, those people were her parents, but now she relies on support from her partner. Specifically, she seeks instrumental support to help her cope, such as "rebounding ideas" off these people for advice. In addition, Sarah displays a good awareness of her thoughts, and feelings, and is able to identify weaknesses within her game.

Identifying such weaknesses is positive for Sarah, as she pro-actively does something to improve the problem. For example, Sarah is aware that she often makes mistakes when she is physically tired, so to prevent becoming tired in games she does extra physical preparation, such as sprint training. Interestingly, Sarah lets the actions/decisions of umpires frustrate her. Umpires are an external factor that is out of Sarah's control, and she needs to learn to focus on

controllable factors. It was not made evidence that Sarah understood the controllability of stressors.

In addition, other stressors from sources outside hockey influenced Sarah's ability to cope, such as stress at work and the death of her mother. Sarah acknowledges that the death of her mother contributed to her inability to cope, as her mother had always been a major supporter of her hockey and she missed not having her there anymore.

Support

> "Really lacked coaching support; haven't always had a proper coach. Our coach was trying to get selected in the New Zealand team so she is still trying to get in and playing in another province. Those of us still here, I call us the old and wise, don't think it is going to happen. There is so much running around in her own personal life, we came last, so she wouldn't turn up to practices. But if we missed a game, we automatically would be benched the next week, which wasn't really fair and stuff. I think the coach failed to give us commitment and guidance. She would often ring me and say 'Can you take practice?' and because I already coach two other teams, I want to get to my own team and be told 'This is what you are doing'."
>
> "One of the people who I do rely on is my partner. He plays hockey himself so he is quite good, and says 'That pass you did wasn't really the right option'. I also have a school teacher I work with that has coached me since I was 15. He turns up every week to watch my team and is very negative. But I take the negative in the right way, as he is only negative against our team if we stuff up. We actually sit down and talk tactics and stuff, which I find really helpful. Dad also is a support and our manager is our surrogate mother.

Researcher's Interpretations of Social Support. A lack of good coaching support presents an obvious stressor for Sarah. Rather than her coach being a source of support, the lack of, or influence of, the coach contributes to Sarah's increased stress. Specifically, Sarah expressed

feelings of resentment towards the coach due to a lack of commitment (i.e., “We come last”) and guidance, perceived unfair treatment, and demands placed on her by the coach (e.g., taking practice for the coach).

Interestingly, Sarah displays a pessimistic and negative attitude, where she puts down her coach’s goal to make the New Zealand team. For example, she states “us, the old and wise, can’t see it’s going to happen”. This comment can be seen in combination with a comment made in the introduction, about having the “perception that it is extremely hard for small provinces to produce elite level players, and some time ago decided it was a waste of time aspiring for higher honours”. Specifically, she felt it was in the “too hard” basket, and expressed a loss of hope or belief in achieving with the sport.

The researcher is unable to infer what thoughts or perceptions specifically construct such a view. However, she believes it could be caused by one or a number of the following feelings: disappointment at not achieving more within her career, regrets at giving up on her dreams (e.g., playing for New Zealand), jealousy at not having the same opportunity, feelings of low self-worth/self-esteem (e.g., need to put others down to feel better about herself) and frustration at the barriers to smaller provinces.

For instrumental support, Sarah’s partner is her core support. Not only does she value his opinion, but she also respects his point of view, as he is a hockey player as well. In addition to her partner, she also seeks instrumental support from a previous coach who watches her games. Although the previous coach is extremely negative, Sarah interprets this negatively positively, in that the coach is helping the team identify weaknesses, to help them improve, and she enjoys engaging in conversations about tactics. Also Sarah’s father, and her team manager, whom Sarah refers affectionately as her surrogate mother, form part of her support network.

Case Study Three — “Megan”

Introduction

Megan first began playing hockey at the young age of five. Early on, it was evident that she would have a promising career within the sport; at only 13 Megan was selected to play at

senior provincial representative level. It was hardly surprising that Megan went on to represent New Zealand, achieving 150 caps during her 15 years playing at that level. Megan's enthusiasm and passion for the sport is clearly evident as she speaks of her involvement.

However, she believes her focus within hockey is now changing as she readies herself for retirement. Although Megan has still been playing at senior provincial level, it has been 3 years since she last played for New Zealand and now has resigned herself to the fact that it is finally time for her to retire from playing hockey. Over the duration of her career Megan believes she has been an extremely committed, motivated player who has achieved a lot within the sport, achieving a number of accolades and significant milestones. Megan feels that she is now at a stage where she needs to spend some quality time with her family, and envisages that, after a short break from the sport, she will get involved with coaching to utilise her wealth of experience

Stressors

Pressure to Perform. "The pressure of having to perform, and I think that is quite often pressure you put on yourself. One of the main pressures is knowing where you stand with what the coach wants. I think that, for a lot of people and for a lot of team situations, if there is not good communication between the members and the coach and you don't really know where you stand, then that is such a major pressure situation that can blow a team apart. I never felt any pressure of being scared of my position, cos I love playing hockey and love getting out there. I always challenge myself to be better than my opposition and that is all I have to do really. I think the main pressure on me was being on the bench, or when you didn't perform to what the coach was thinking. Never had any situations where I didn't want to be out there, I always wanted to be out there."

Coach's Actions. Classic example [uncertainty of coaching decisions], I guess, would be when we were in England and it was going to be a significant milestone match for me, which was going to be the first for New Zealand. We had 17 players in the team, so 16 get named and one has to go to sit in the stand. On that day he named me as the 17th man

and yet up till then I had been playing in the starting line-up. It was almost like he was on a hero trip, trying to show everyone that he's kind of the boss and it doesn't really matter where anyone is at. He did this and the whole room, when he named me, was shell-shocked, because everyone knew, you know we are all close. We lost that game. Everyone who played was really flat. I don't think he realised what effect that would have. It was like he was on a big hero trip: 'I'm going to show who calls the shots here'. They [other players] were as bummed out as I was, it was so uncalled for, they lost trust in him. I was devastated to start with, devastated and angry [treated unfairly by the coach] because it was so unnecessary, so uncalled for. Not only me. But you could really tell he was on a hero trip, and that's the type of thing that is so beyond your control. And it was just so mean and you just felt so gutted for someone to treat you like that. In the end I think my coping strategy was to think 'this guy is a real wanker. I can't control what he thinks but what I can control is when I get out there I'll bloody show him', you know, and when I did get back out there I got on with it, was positive and played well. You have a choice, don't you. You either let him totally destroy you or you use it as 'I'll fucking well show you ya wanker'. In the end I lost respect for him, but I used him for fuel for me, because it fuelled me into getting out there and giving my best."

Lack of Team Cohesion. "Relating to something like Barcelona, where the team fell apart, the stresses there were being on the field and knowing some of the players didn't want to pass to each other. Those kinds of things were beyond your control, but they are really stressful. I know myself in the end that they were something I couldn't control, so you had to just control how you played and try and do your best. Those kinds of things are yucky situations to be in because you can't really do much about it. It gets that bad. The whole team drifted apart, you ended up with sort of like three groupings type thing, and kind of had strong personalities that in the end wouldn't pass to each other. Management had lost control and it was beyond repair."

> *Shock Loss.* "The only other time I've felt really stressed like Barcelona was 6 years later in one of our games at the World Cup, when were playing Korea and we were 4-nil up and we lost 5-4. They scored five goals in about 10 minutes and it was one of those freaky situations where all the touches went their way and we had been playing really well and still buzzing. But when they started to score goals, we still tried to play the same open pattern of hockey and none of us, because…it was like we were all blown away, none of us acted in such a way to say 'shit let's shut this game down', you know. I guess when you look at it at the end of it, you think that was a good learning curve. We ain't going to ever let that happen again. I think we never counteracted because we thought 'Nah nah, we're playing well' and I think everyone thought we would get another goal. Suddenly when they got four goals in 3 minutes, everyone was just shell-shocked."

Researcher's Interpretations of Stressors. Megan reported a number of situations that she has found stressful over her career. Specifically, such stressors involved a pressure to perform, lack of communication, uncertainty about coaches' views, sitting on the bench or not performing to coach's ideals, poor team cohesion, and an inability to change game plans when current plan is not working. Several stressors, one of which Megan described as a "freak situation" (opposition scoring five goals in 10 minutes even though team had previously been playing really well), including poor team cohesion and spending time on the bench, caused Megan to become stressed.

However, Megan clearly demonstrated that, although she was stressed, she often coped well, loved being challenged and always wanted to be out there. Indeed, a low level of concern reported by Megan suggested that she had a high level of confidence and a low level of anxiety. A number of the stressors that Megan reported involved related to the team environment. Megan also displayed a good understanding of controllability of the stressors that she reported.

Megan identified the pressure of having to perform as a stressor, specifically emphasising that the pressure is often that which you put on yourself. Indeed, within the team environment, there are a number of pressures that contribute to having to perform, such as vying for a position in the starting line-up. The team environment was a central theme to Megan's stressors (i.e.,

sitting on the bench, being unclear where you stand within the team or with the coach, lack of communication, poor team cohesion). Such a team focus implies that Megan was able to cope well with her own performance, which she could control, but felt that issues within the team environment had the potential to cause stress to the team. For example, Megan felt that the lack of communication, which contributed to not knowing where you stood with the coach, had the potential to "blow the team apart". In particular, the situation when Megan was going to get her 150th cap and the coach named her the non-playing team member (17th player) and she had to sit in the stand. Such a decision impacted both on Megan and on the team. Unfortunately, the team was affected by the coach's actions and this appeared to contribute to the team's under-performance. In addition, Megan felt angry, and let down and consequently lost trust in the coach.

Indeed, Megan's understanding of what she was able to control and what she wasn't (e.g., others' actions) enabled her also to cope effectively with team environment stressors, such as when discussing stressors caused from poor team cohesion, such as the situation Megan experienced in Barcelona, where she believes management lost control and strong personalities in the team led to divisions in the team. Megan personally felt stressed "knowing some of the players didn't want to pass to each other" and stated that although "those kind of things were beyond my control" she still found it "really stressful".

However, she did not let it affect her performance and realised that they were something she couldn't control, so she "had to just control how I played and try and do my best". In addition, Megan displays a strong desire to perform, rather than allowing the actions of her coach affect her mentally [not naming her in the team for her significant milestone match] and she showed great determination and attitude. Such determination and an "I'll show you" type attitude contributed greatly to Megan's ability to cope. For example, Megan stated "my coping strategy was to think 'this guy is a real wanker'. I can't control what he thinks but what I can control is when I get out there I'll bloody show him, you know, and when I did get back out there I got on with it, was positive and played well. You have a choice, don't you. You either let him totally destroy you or you use it as 'I'll fucking well show you ya wanker'."

In addition, to demonstrate that Megan was confident in her own abilities, she expressed that she never felt a pressure of her position within the team. Specifically, she “loved getting out there” and challenging herself to be better than her opposition, and took the view that by being better than her opposition “that was all (she) had to do really”.

Other areas where Megan felt stressed related to uncertainty around coaching decisions, in which Megan had little control. For example, she found stress due to the pressure of having to spend time on the bench, and pressures due to not performing as the coach wanted, or to his ideals. It was evident, although not directly implied, that Megan felt such stressors were a result of the coach not communicating what he wanted and contributed to feelings of not knowing where she stood with the coach. Such situations could potentially affect players, but Megan’s positive approach and determination helped her cope. In particular, Megan expressed her love of simply playing and never felt there was a time when she didn’t want to be out there (“I always wanted to be out there”).

Megan recalled what she defined as a “freaky situation”, in a World Cup game where the team was playing really well, leading 4-nil and then, within 10 minutes, Korea (opposition) scored five goals, to win. Megan believed that the team thought because they were playing so well they would score again. However, she feels the team were “shocked” no one took charge to say “shit, let’s shut this game down”, and failed to take leadership and alter game tactics. Megan believed this was a useful learning curve and wouldn’t let that happen again.

In summary, the majority of stressors reported by Megan were related to the team environment. However, these stressors rarely caused Megan to come too stressed, and mainly only caused her concern. The fact that Megan rarely became overly stressed was probably due to her high level of confidence in her ability and her understanding of what stressors she could control.

Coping Experience

> “When I first started playing for New Zealand, all that kind of stuff [Sport Psychology] was never used, then towards the end, when it became more fashionable to have

> psychologists and stuff, and when we starting using coping strategies, yeah it was really good, very worthwhile having. You know you have to address those kinds of situations before you get to them and then you can cope with it, by preparing yourself. I think eventually we did cope better, you know the 'what ifs'. Not in every game, but you expect to have situations in some games where it could happen [stressors]. You have to visit all toxic situations so when they do occur you can deal with them so you're not blown away by thinking 'shit what is happening here'. It wasn't till after that World Cup [loss to Korea] that we really got into it. I think we learnt a lot from that. I think if we had done it before that game we would have coped and not lost, because it was just freaky."

Researcher's Interpretations of Experience and Knowledge of Coping Strategies. Megan recalled that when she first started playing for New Zealand, using sport psychology was unheard of in hockey. She believes it was not until the discipline became "fashionable" that the New Zealand hockey team began using sport psychology techniques, such as coping strategies. Despite an early reluctance, which was not uncommon in New Zealand (particularly with relatively minority sports), Megan believes that she has found the techniques very worthwhile. Although Megan didn't specify an extensive knowledge or experience of using coping strategies, the main strategies she utilised were "what if" scenarios. Specifically, Megan saw this as a useful coping strategy and highlighted the importance of addressing potential situations and preparing for such situations, so that you can deal with the identified stressors when or if they happen. She particularly emphasised that this technique prevents players being shocked or panicking and having a "shit what is happening here"-type response. Indeed, Megan revisited the situation at the World Cup (e.g., shock loss to Korea) and feels that the team learnt from that situation and devoted attention to learning to cope.

Coping Strategies/Responses

> *Awareness and Self-Belief.* "I think revisiting the old situations of the bad. Revisit them and remember them because they are good learning tools. Like, you don't want to rehash

them all the time but they are a good learning tool. Coping strategies are always about being more aware that if something does start happening again like that [something that's happened before] you know what you are going to do to counteract it. I always just said to myself 'believe in yourself and what you can do' and enjoyed being out there. In my length of career I sort of realise that we put so much pressure on ourselves. When I played my best was when I was just out there enjoying the game for me. I coped really well when I was first in the team because I was just so enthusiastic."

Goals, Preparation, and Motivational Words. "I make sure to revisit what I'm going to do during the game, what I want to achieve [goals]. When I talk to young people/people about it now [hockey] the main thing that used to drive me was that I love the game, but I always wanted to be better than my opposition. So I always challenged myself against [goals] and knew what my opposition was going to be like [preparation]. I always used to set targets and I always kept a diary where I recorded every game. Before the games, I'm one of these people who are into motivational words; during the team talk you would become aware of what you needed to do so I would go back and write down three points (key words in bold on my page) that I needed to focus on in the game. Then at end of the game we'd have a debrief and I'd record relevant information from it in my diary, just points to note."

Arousal Control. "Try to make sure before the game, heading off to that game that I listen to music and try to relax. Always trying to be at that nice balance where you are not too anxious but you are a bit excited [arousal control]. A little bit nervous is OK. I try to relax, not think too much about it, just listening to music, just wander around, maybe chat to someone who might be there. I'm not one of these people who can't talk to people before a game because it takes my focus away. I tend to be more relaxed, later on, the older I got, the more experience I got. I am better if I'm totally relaxed rather than focusing or thinking too much about it, because once you get out there it just happens

[state of flow]. If you're thinking too much about it when you get out there you are too tense."

Communication. We needed to be more honest with each other. Just make sure you are talking, if you can see someone's game has gone out the door you lift them up and help. With talking you have to be positive.

Overcoming Mistakes. "[Example of situation where Megan has been beaten by opposite player.] Visualise it and think about it, you know, like 'OK I'll mark her hard', playing well, marking hard, getting the ball off my opposite. I think back to it [mistake] and quite often when you are feeling like that [dwelling on mistake], you know 'Desire' [motivational word] might have been my word for the game so I say it to myself. Initially I would use a cue word first, then a simple action, like I might mark my opposite player tighter, do something that is quite simple and basic but I know I can do well. Which gets me back into what I'm doing. Get me back into the game."

Researcher's Interpretations of Coping Strategies. Megan used numerous coping strategies, such as awareness of factors that influence her performance, learning from previous experiences, recording debriefs in a diary, pre-game preparation and planning, visualisation, relaxation and arousal control, refocusing techniques, goal setting, key words and positive affirmations. Predominantly these strategies were problem-focused, identified to deal with controllable areas of the stressors. Again, these strategies displayed Megan's personal resources and reflected Megan's high level of confidence and low level of anxiety.

Megan actively prepared for competitions and believed that coping strategies are about awareness. For example, "if something does start happening again like that [something that's happen before] you know what you are going to do to counteract it". Techniques that Megan specifically used to assist with awareness were to revisit past situations and learn from the experience, and devise a strategy to deal with it in the future (active coping). In addition, Megan

recorded a debrief of the game in a personal diary, which would assist in revisiting experiences, contribute to learning, and assist with planning and preparation for future games.

Megan also prepared for games by researching her opposition and using goal-setting techniques. Specifically, during the pre-game team talk Megan would become “aware” of what she had to do, and afterwards she would write down in bold three key points and use those key points as key words within the game. Megan also used such words as a focusing technique, to concentrate on what she had to achieve. Indeed, Megan emphasised the importance of going into a game with certain goals you want to achieve.

Self-talk techniques such as key words, motivational words, positive affirmation played a vital role in Megan’s performance. Megan’s use of self-talk was both problem- focused and emotion-focused. For example, she used self-talk for refocusing, enhancing self-belief, and also for regulating emotions. In particular, when she is experiencing a problem in her game [e.g., beaten by her opposite player] she used cue words in combination with visualisation (confidence) to refocus on a simple action (basics) she knows she can do successfully to get herself back in the game. In addition, she also used key words to regulate her emotions. However, unlike the low copers Megan was trying to enhance her emotions (e.g., motivational words – ‘desire’) rather than preventing negative thoughts.

Megan believed that self-belief and enjoyment are major factors in performing optimally. For example, she stated that, personally, she always told herself that you should always “believe in yourself and what you can do and enjoy being out there”. Megan believes that “we [players] put enough pressure on ourselves” and that she played her best when she enjoyed playing. In particular, she believed that early in her career she coped due to her enthusiasm and love of playing the game.

Before the game, Megan is aware of her arousal levels and likes to be at that “nice balance where you are not too anxious but you are a bit excited”. In order to control her arousal, Megan likes to relax, listen to music, and even talk to another player before the game. On the field, Megan believes that “it just happens” and appears to be in a state of flow. Indeed, achieving an ideal performance state is important to performing optimally. Being able to achieve an ideal

performance state implies that Megan had an awareness of her arousal levels and had the ability to find the optimal level of arousal for her (balance where not too anxious but a bit excited).

In summary, Megan reported numerous coping strategies. Predominantly these strategies were problem-focused. Past research suggests that problem-focused strategies may contribute to long-term management of stressful situations. In particular, Megan displayed a good awareness of herself (e.g., arousal levels) and prepared diligently for competitions, which enhanced her ability to cope.

Reaction to Stressors

> "For example, for me, say something going wrong before a game would be 'not making the starting line-up'. I guess you just feel gutted and then you know you kind of get quite shitty and disappointed, and then you know you need time out. So you take a bit of time out and then really focus on when you get out there what you are going to do. Just making sure you outwardly seem positive for the rest of the team, it's important not to sulk or anything because it doesn't get you anywhere. And on the field is to just make sure you keep doing the hard yards, you know like one stressful situation on the field is if something's not coming of for you or so and so is not doing their job, letting the team side down. You just have to not get pissed off, just keep focusing on the next thing and do it well. Important not to focus on the negative and try to focus on the positives."

> "If someone isn't doing their job, I think initially you get pissed off because they are not doing their bit, especially if they are not doing their job and you have to cover them you do get pissed off but I don't let that drop my game. You know sometimes you get a bit more fired up. But what I do is try not to focus on it because then if you focus on that then your game drops and then everyone drops and gives up. You also try to talk them through it too, because they just might be having a bad patch. So you try and support them, certainly don't yell at them. Usually when things go wrong, I just get stuck in, not

the sort to panic. I've always been able to pull myself out of a bad patch, focus on the basic, and just focus on a simple task, not worrying about the bigger picture, just saying to yourself to focus on taking the ball of that girl when she gets it. It's just a real simple thing that gets you into the game."

Perceptions of Reactions to Stressors. "Personally I perceive it to help me cope better because then I don't dwell on it. Because if I dwell on it then my game just goes out the door. If I can lift my game and keep playing my part well, then quiet often you find it will lift them back out."

Researcher's Interpretation of Reaction to Stressors. In general Megan's reaction to stressor is positive, where she gets *stuck in,* rather than panicking. Her ability to always regain her composure and pull herself out of a poor performance (bad) patch reflects her confidence in her abilities and self-belief. As identified, Megan generally rarely gets overly stressed and tends to deal positively with stressors. However, she does find not making the starting line-up hard. Although Megan is disappointed, she quickly takes time-out to refocus (which you can are able to when you are on the sideline) and emphasises the need to remain positive (not sulk). The Megan believes when you get on you can't let it get to you, you just have to keep doing the hard yards and if you make a mistake focusing on the next thing and doing that well. Focus on simple task, rather than worrying about the big picture (e.g., focus on successfully receiving the ball rather than worrying about the score etc).

Megan believes that her reactions to stressors and positive reinterpretation allow her to cope better; specifically she doesn't dwell on a mistake and is able to keep playing her part in the team and perform well.

In summary, it is clearly obvious that Megan positively reinterprets stressful situations. Using such a strategy also allows Megan to regain her composure and performance after experiencing a difficulty.

Coping Outcomes

Automaticity. “My coping strategies are automatic, more now. Never have to really think about it, just come naturally.”

Effectiveness. “I think my coping strategies are always effective, [why?] because they suit me. Because you know a lot of the ways I deal with stuff certainly don’t suit other people but they are me. I’m visual and I’m a challenge freak that’s how I look at it. Like people say about him [coach] and how I use him as fuel for me. Not everyone is made like that. Not everyone can cope that way. Like they need to be pumped up and stuff. Not everyone can use a negative to create a positive. I guess also using my diary and just by being relaxed helps enhance my effectiveness.”

Researchers Interpretations of Coping Outcomes. In general, the coping strategies employed by Megan were perceived to be both automatic and effective. Specifically, Megan believed that the effectiveness of her strategies were because they suited her personality. As previously stated Megan likes challenges and even referred to herself as a *challenge freak.* In particular, Megan uses adversity to fuel her determination. For example, when she was perceived treated unfairly by the coach, she used *him as fuel for me.* Indeed, as iterated by Megan, the strategy works because of her determination and attitude, however not everyone can cope that way. In addition, Megan identified using her diary and ensuring she is relaxed as important contributors to her coping effectiveness.

Personal Characteristics

“No I don’t really incorporate coping skills practice in my hockey training, but I do when I’m out running. Like I said I’m a little bit of a challenge freak. When I’m finding my training really hard and it might be like when a games really hard, I always sort think of someone who really pisses me off and say think to myself ‘if I can’t get up this hill [while

running] they [person who pisses me off] are a better player than me'. Think of things like that to get me up that hill, or if I can't handle this I shouldn't be in the bloody New Zealand team. Well it always works for me. Or you picture their face at the top of the hill laughing at you because you couldn't get there [laughing]."

"Other people not understanding, like if you haven't got support. So outside pressures can result in difficulties in coping. When you got other people behind you, you do cope really well. Whereas if you've got people going 'Well I bloody told you so' or that sort of thing or doesn't really make it easy. I think when you are away on tours and things aren't' happening and there are pressures there, I think if you revisit the sacrifices you've made and the family you've left behind that certainly helps lift you up and helps you get through what you going through. Get on the phone and ring them up [family] that helps; it's a place where you can get stuff off your chest. You know quite often you need to get something off your chest, talk to someone outside the group about it and they can always give you a different picture of things. You cope when you've got good support structures, you don't cope if you don't have good support behind you. If your happy with your personal life and life in general you can cope with anything but if you have stress in your personal life then you down in life you don't cope you don't have the energy. When you find yourself in these situations where you are not coping [in hockey] and it's chaos at home, then you start to wonder 'what is it all for?' Like towards the end when I was getting treated the way I was getting treated [perceived unfairly treated by the coach] and I was just separated from my husband, had a little girl at home, I just felt selfish."

"Enjoying the moment of being out there and being able to play. That is the easiest way that I've found in the end is just enjoying the moment of playing that's when I've played my best when I've enjoyed playing the game! Not having to be out there, just honoured and happy to be there and that encompasses like enjoying team mates and just everything that is happening."

Researchers Interpretations of the Personality Characteristics. Megan was constantly challenging herself to perform better and was driven by the challenge of playing competitive sport, where she thrived on it. Her determination and desire to be successful were evident throughout the interview. Even when Megan found things tough she would challenge herself and achieve. For example, when she found *training really hard* she would *think of someone who really pisses* her *off and think to* herself *'if I can't get up this hill* [while running] *they* [person who pisses me off] *are a better player than me'* to get her up that hill. In addition, she positively reinterprets situations and rationalises situation e.g., *if I can't handle this I shouldn't be in the bloody New Zealand team.* To serve as motivation Megan likes to revisit the sacrifices she has made and acknowledges that the influences that families and outside pressures place on her ability to cope. Indeed, she identified others not being supportive or understanding will influence ability to cope. Plus when she is happy in her personal life she is able to cope more effectively. Within the team environment, she valued talking to family members on phone will on tour to help get things off her chest and gain a different perspective on issues within the team. Megan is a strong believer that you should play for enjoyment and felt honoured and happy to be there [playing for New Zealand]. She believes that other players should enjoy the moment. Specifically, enjoying being with your teammates and the experiences you share.

Support

> "I know with our New Zealand Coach, he always liked putting everyone under pressure all the time. He liked to drive people to see how far he could push them and I guess in a way that is good because he was always challenging people and to get better you have to be challenged. But I also think from my experience, when you work with women you need to at times meet in the middle. Their input and opinion is important, particularly more so with women than men. So I think you need to respect as well as challenge. We did team session, group goal setting, individual goal setting, sessions on 'what if' and expectations. Set goals for tournaments and each game. Support people for me are the manager is good sounding board. Some of the coaches have had been open and honest, positive. Team mates, most of them you can rely on for support. Suppose supporters, you

always get supporters who come along who have been previous players that you can go along and chat to."

Researcher's Interpretation of Support. In any team the coach is instrumental in enhancing the performance of the team. Megan felt that her coach provide opportunities to enhance their mental skills and cope with pressure, by particularly stressing the players and putting them under pressure. He would often drive people to see how far he could push them, which Megan believed was good as it challenged the team to get better.

Megan sought instrumental support form team mates, previous players and coaches, and emphasised the importance of positive and honest communications. In addition, she identified the need when working with women that their opinion and input is important; women have a need to feel respected. Indeed, this view has practical implications when dealing with females.

Areas Where Players Need Assistance

- Open and Honest Coach – that they respect you
- Time Management
- Desire to be the best – belief can get to international level
- Self-Motivation
- How to cope with situations in game, especially when things go wrong
- Dealing with umpires
- Deal with nerves
- Team Cohesion – young people now days are too individual – getting to know everyone
- Focus on enjoying the moment – is being out there and being able to play.
- What turns them on – recognising when you are playing your best and why you are and repeating that.

Part Three
Intervention

The findings from the intervention of the investigation are presented within this section. These findings are based on a case study analysis were self-report performance profiles findings were examined to identify any intervention effects. The section firstly examines the intervention effects based on the data collected from participants' self-report, coaches', significant others and other players' performance profiles (refer to Appendix Q & R). The performance profiles were used to obtain information on the participants' knowledge of, importance and use of the coping skills. Secondly, this section will deal with the completed worksheets and verbal feedback provided during the intervention. Then lastly, this section will evaluate the responses to the social validity questionnaire administered during the follow-up period.

Participants

The participants were members of the New Zealand Hockey Academy Squad (N=4). The participants were required to be aged 18 and over. Five members of the squad were purposely selected by the New Zealand Field Hockey Development Officer and were invited to take part in the study. One member of the five selected to participate in the intervention, withdraw due to injury in the early stages of the intervention. The four remaining participants ages ranged from 18 – 24 years, with an overall mean age of 21.25 years (SD = 2.50 years). The number of years that participants had gained competitive hockey experience ranged from 5 – 17 years, with an overall mean experience of 11.50 years (SD = 5.20 years). More detailed information on the cases are can be found within the methodology section.

Intervention Effects: Overall Outcome Scores

The participants of the intervention completed a self-report performance profile at three stages during the intervention: pre-intervention, post-intervention and at a follow-up intervention

point at the end of the season. The self-report performance profiles collected information on knowledge, perceived importance and use of the mental techniques. The overall scores were calculated for each off the participants' combined knowledge, perceived importance and use of the mental techniques. Table 19 looks at the combined effects of the participants' knowledge, perceived importance and use of the mental techniques. Participants' scores were analysed as separate cases to capture the individual affects of the intervention.

As illustrated in Table 19 the knowledge, importance and use of overall mental skills meaningfully improved across all four cases. Specifically, from pre-intervention to post-intervention the cases had a large improvement on their knowledge of the mental skills, and had maintained their knowledge through to the follow-up profiling. There was a slight overall decrease in knowledge for Cases 3 and 4 during the follow-up profiling, however this was negligible. Pre-intervention profiling revealed that although the cases had very little experience at using mental skills, they still viewed it as important. This was evident through high ratings on the pre-intervention profiling. During post- and follow-up intervention profiling, participants rated the importance of mental skill use higher yet; indicating that the intervention further enhanced the importance of the coping mental skills programme. The most important changes emerged in the use of mental techniques. Indeed, participants improved meaningfully from initial pre-intervention profiling to post-intervention, and even improved further by the follow-up profiling.

Table 19

Intervention Effects: Participant's Overall Self-Report Outcome Scores

	Overall Scores		
Quality	Pre-Intervention	Post-Intervention	Follow-Up
Knowledge			
Jessica	6.29	8.14	8.29
Mary	4.86	7.71	7.86
Elizabeth	6.00	8.86	8.57
Amanda	5.86	8.57	8.43
Importance			
Jessica	7.86	8.43	8.00
Mary	7.86	9.29	9.29
Elizabeth	9.14	9.71	9.57
Amanda	8.14	8.71	9.00
Use of			
Jessica	6.29	7.71	7.71
Mary	4.86	7.71	8.14
Elizabeth	5.86	8.00	8.43
Amanda	5.43	8.00	8.57

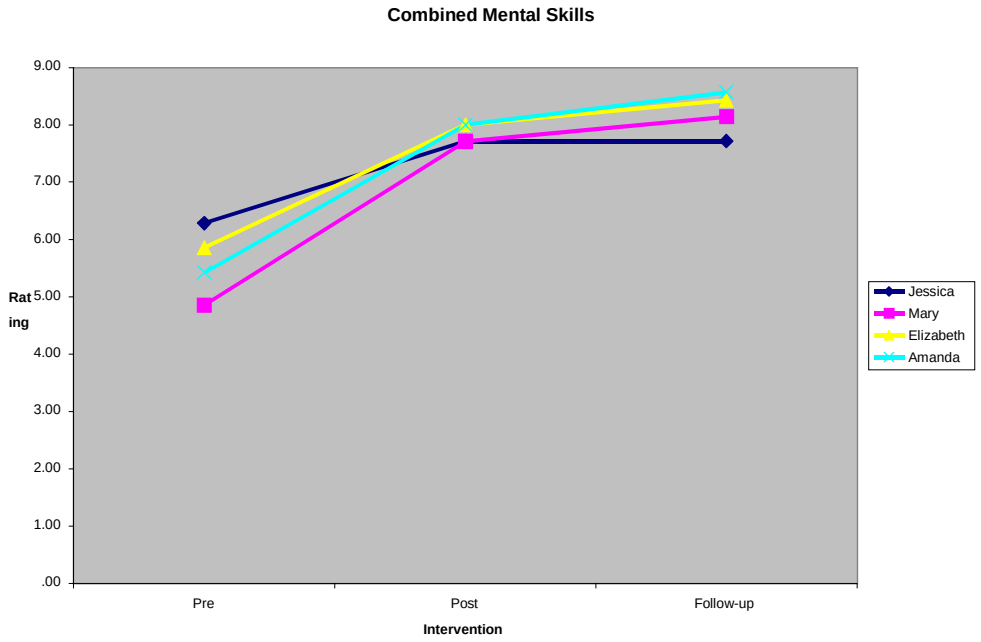


Figure 5. *Line graph displaying the combined of intervention effects across overall mental skills scores for each participant.*

As illustrated in figure 5, it is evident that all participants significantly improved in their use of mental techniques across the intervention and maintained or continued to increase slightly post-intervention. In particular, Amanda and Mary were identified as making the meaningful improvements across the intervention. A possible reason for this is that both Mary and Amanda had limited prior experience using mental skills, hence, they had the potential to meaningfully improve. In addition, the intervention may have been useful for these participants in assisting them with establishing some direction and purpose in hockey. During the initial meeting with the researcher both participants commented on their lack direction (i.e., neither had really thought

much about their hockey careers until now). Maybe this was an opportunity for Mary and Amanda to be committed to improving their hockey performance.

Intervention Effects: Individual Mental Techniques Across Individual Cases

Although combining the individual items to give overall knowledge, importance and use of the mental techniques scores allows the researcher to look at the combined effect of the intervention; it is at the expense of the specificity of the information provided by those individual items. Therefore, the researcher wanted to look at individual item scores to identify if overall scores are obscuring some important changes for specific mental techniques. It would be reasonable to expect that participants would vary on participants' knowledge, importance and use of the mental skills depending on each participants' existing abilities and her needs. Because the data of mental techniques had to be analysed individually by each participant, the researcher presented the information visually within graphs. The raw data participant's self-report profiles are presented in tables (refer to Appendix T).

Participants' scores for mental skills: mental toughness, coping with pressure, concentration skills, confidence, competition planning, communication, and self-talk and thought stopping items are displayed in Figure 7. This depiction helps to illustrate mental skill use relative to what each participant employed and found useful. Results indicated that meaningful improvements in knowledge and importance of mental techniques across each of the participants occurred. In particular, the findings of increased knowledge and importance in all areas was particularly notable and reiterated that the activities outlined in the workbook were effective in facilitating the learning of mental skills. However, the lack of experience of the participants with mental skills training, could have contributed to such a finding. Mary and Amanda were identified as displaying the largest increases in knowledge, with Mary also showing meaningful changes in importance. As previously stated, both Mary and Amanda had limited previous knowledge and experience using mental skills, therefore, it is not surprising that they had large improvements in knowledge and importance.

In addition, the knowledge of the individual mental skills were also examined (refer to Figure 6). In support of the findings in Table 19, all participants improved in their knowledge of mental skills training, however it is evident that Mary and Amanda experienced the greatest gains in knowledge. For the importance of the combined mental skills, again Mary made the largest changes in her perception of the importance of mental skills to her hockey performance (Appendix T). However, overall importance of the mental skills was highly rated by all participants. It was clearly demonstrated that Mary and Amanda's knowledge of, perceived importance and use of mental techniques improved considerably over the duration of the intervention. In particular, Jessica improved across most of the mental skills. Specifically, she increased meaningfully on coping with pressure and concentrations skills. However, she did not retain her knowledge on these skills effectively, as she experienced a slight decrease during the follow-up period. Elizabeth showed slight improvements across all mental skills with the most gains being found for competition planning, confidence and self-talk. Mary and Amanda are discussed in more depth as they showed important improvements.

The results revealed that the intervention greatly increased the importance Mary and Amanda placed on mental techniques and facilitated their learning over a number of mental skills. Indeed, within this section, the researcher wanted to identify what individual mental skills Mary and Amanda found were of most importance to her ability to cope and explore where the most learning occurred. Mary perceived confidence as the most important factor in helping her cope effectively. In addition, concentration skills and coping with pressure were also of high importance. Interestingly, despite an increase in the importance of mental toughness during the intervention, it's importance declined during the follow-up period. This could indicate that the intervention failed to adequately demonstrate the importance and/or understanding of mental toughness. The most learning for Mary occurred in relation to competition planning, where notably her learning continued after the intervention. In addition, Mary's understanding of skills to enhance confidence and concentration also improve substantially.

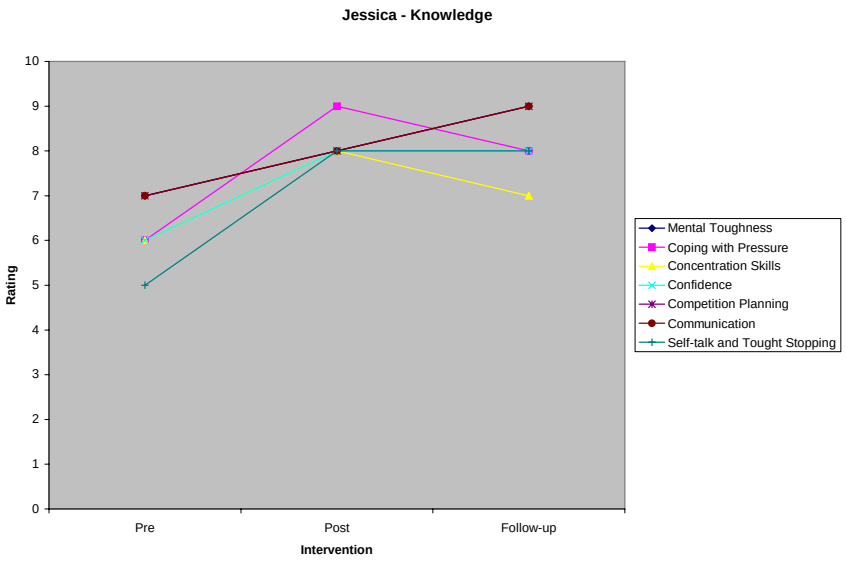
The most learning for Amanda occurred for competition planning and coping with pressure. In addition, confidence and self-talk improved meaningfully during the intervention,

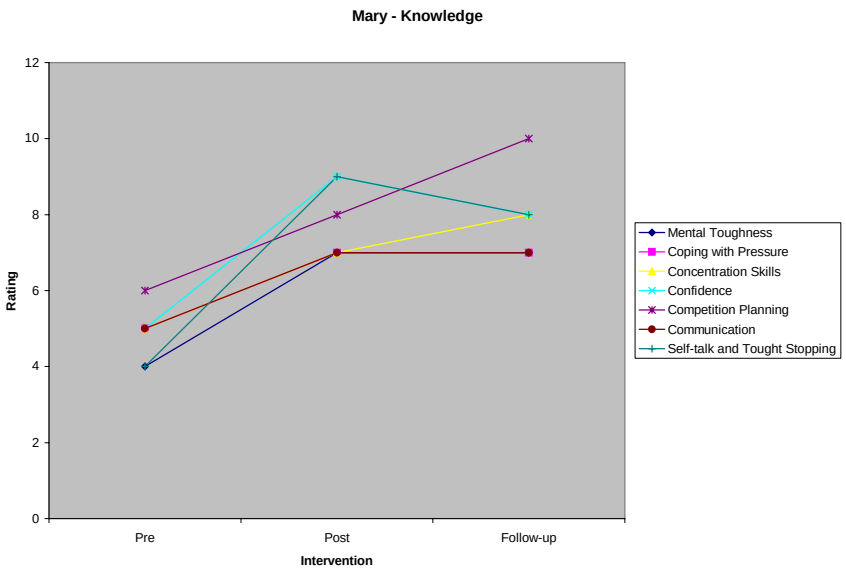
however, some information was lost and not retained over the follow-up period. Amanda also made knowledge moderate improvements in her knowledge on concentration skills.

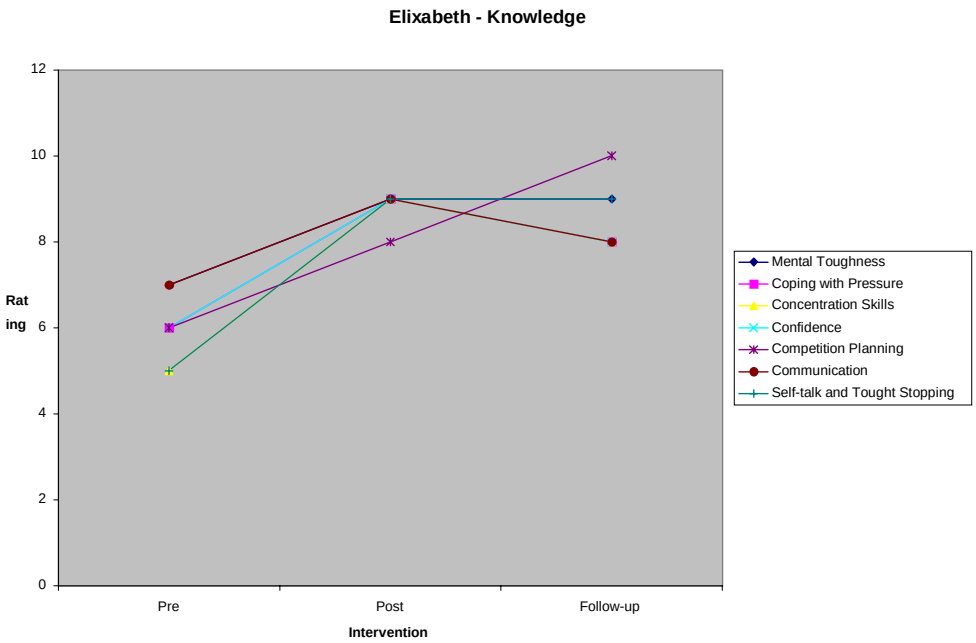
To investigate if the participants were able to transfer learning gained through the workbook exercises, the researcher focused on the use of mental techniques. Indeed, the performance profiling for the use of mental techniques does not imply that the participants necessarily performed the techniques effectively. However, due to regular verbal feedback and guidance on the use of such techniques the researcher hoped to minimise the misuse and ineffectiveness of the techniques learnt. In addition, valuable feedback from the participant's coach, another player and a significant other (refer to Appendix Q) identified effective outcomes of each mental skills, and provided the researcher with further confidence in the findings.

Indeed, as previously stated, it was reasonable to expect that participants would vary in knowledge, importance and use of the mental skills. Figure 6 illustrates the findings for each mental skill across the intervention. Firstly, for Jessica, results revealed that there were meaningful increases in concentration skills and coping with pressure. Although Jessica's use of self-talk improved during the duration of the intervention, she experienced a decrease in use during the follow-up period. No improvement was found for mental toughness and communication. Particularly, for communication this finding could be due to her already high use of communication. For Mary, results revealed an increase in all mental skill during the duration of the intervention and maintenance of further increases during the follow-up period. Mary's use of self-talk and thought stopping and communication increased during the follow-up. In addition, Mary's confidence increased. Interestingly, the New Zealand Development Officer described Mary as a quietly confident individual who is relatively reserved and doesn't really push herself enough. The results revealed that Elizabeth made good improvements in using a number of mental techniques, in particular concentration and coping skills, self-talk and thought stopping improved steadily. Elizabeth had a dramatic improvement in her use of competition planning. However, no improvements in mental toughness. Results showed that Amanda has improvements in all areas, particularly, communication, competition planning, concentration skills and coping with pressure. An interesting finding was that although Amanda's confidence increased during the course of the intervention, it decreased again during the follow-up period.

Such a finding seems unusual given that Amanda showed improvements in the other mental skills. For example, one would expect the use of pre-game preparation plans, such as coping plans (re: as part of the intervention) combined with other skills, would enhance confidence.







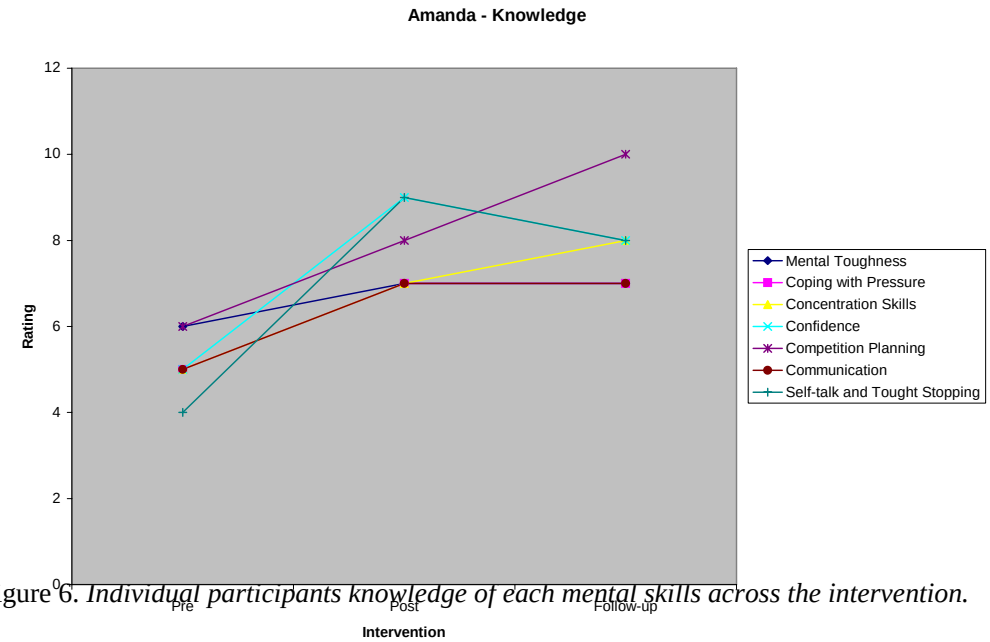
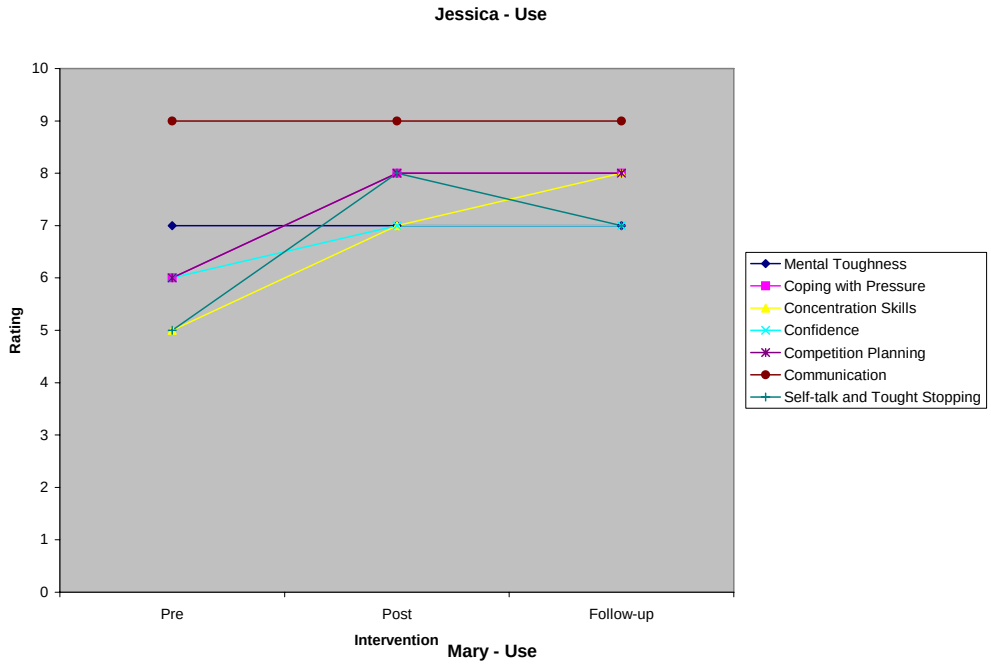
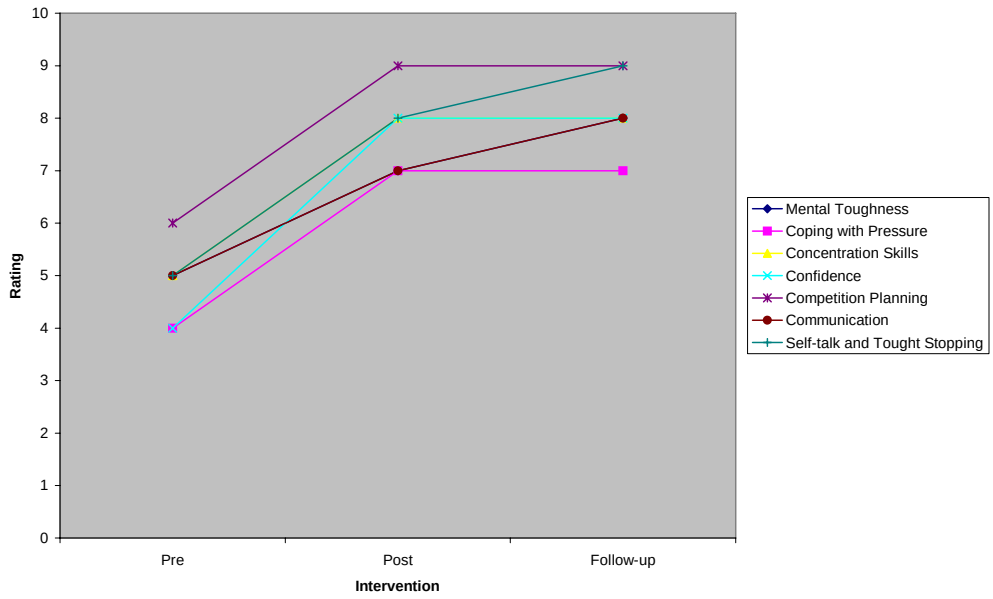
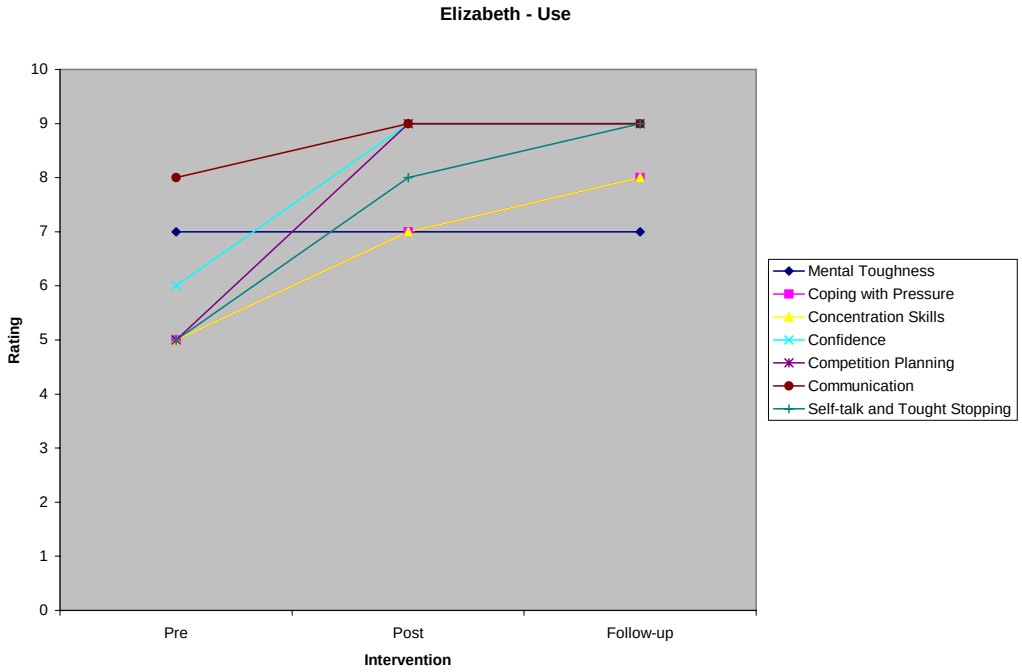


Figure 6. *Individual participants knowledge of each mental skills across the intervention.*


Jessica - Use
Rating
10
9
8
7
6
5
4
3
2
1
0
Pre
Post
Follow-up
Intervention
Mental Toughness
Coping with Pressure
Concentration Skills
Confidence
Competition Planning
Communication
Self-talk and Tought Stopping


Mary - Use
Rating
10
9
8
7
6
5
4
3
2
1
0
Pre
Post
Follow-up
Intervention
Mental Toughness
Coping with Pressure
Concentration Skills
Confidence
Competition Planning
Communication
Self-talk and Tought Stopping


Elizabeth - Use
10
9
8
7
6
5
4
3
2
1
0
Rating
Pre
Post
Follow-up
Intervention
Mental Toughness
Coping with Pressure
Concentration Skills
Confidence
Competition Planning
Communication
Self-talk and Tought Stopping

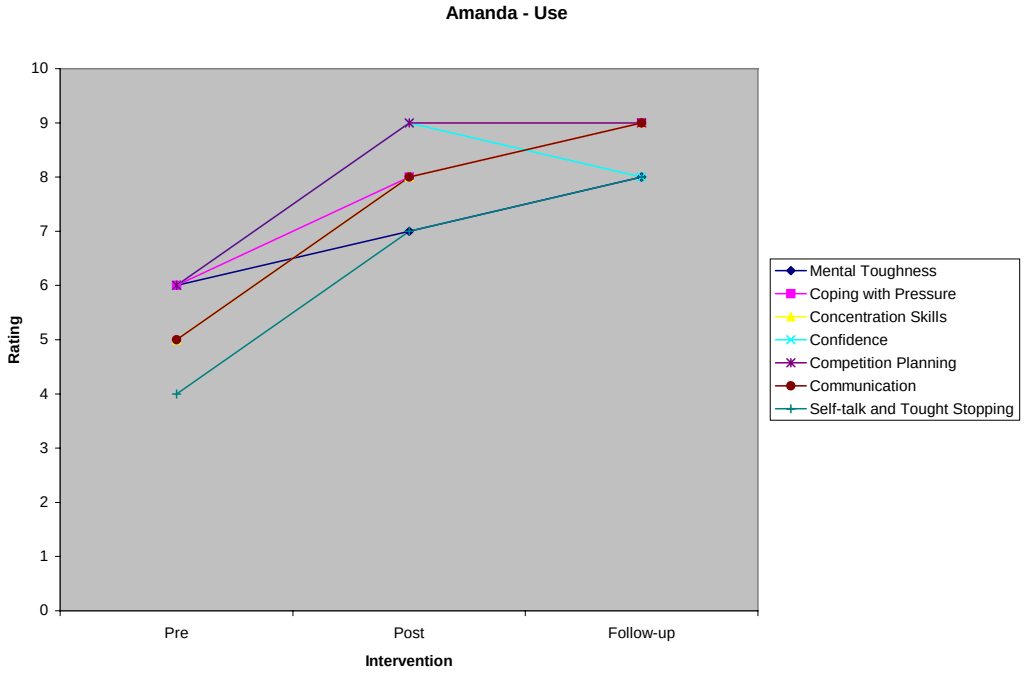

Amanda - Use
10
9
8
7
6
5
4
3
2
1
0
Rating
Pre
Post
Follow-up
Intervention
Mental Toughness
Coping with Pressure
Concentration Skills
Confidence
Competition Planning
Communication
Self-talk and Tought Stopping

Figure 7. Individual participants use of each mental skills across the intervention. Participants Coping Performance Profile: Scores from Coach

A 360 performance feedback methodology was employed in this investigation to enhance the validity of the findings. Specifically, in addition, to the self-report performance profiles, the participants coach, another player and significant other provided feedback via a performance profile of the participant. Across all mental skills, coaches, players, significant others found improvements in the positive use of the mental skills. The below tables (refer to Table 20, 21, 22 & 23) confirm the overall findings of the study that players use of mental skills significantly increased.

Table 20

Intervention Effects: Combined Scores from the 360 Feedback for Jessica

	Intervention		
Quality	Pre	Post	Follow-up
Mental Toughness	7.50	8.00	8.25
Coping with Stress	6.75	8.25	8.25
Focusing on task-concentration	6.50	8.00	8.50
Confidence	6.75	8.25	8.00
Positive Communication	7.50	8.50	9.00
Preparation and Readiness	8.00	8.75	9.00

Table 21

Intervention Effects: Combined Scores from the 360 Feedback for Mary

		Intervention	
Quality	Pre	Post	Follow-up
Mental Toughness	6.25	7.50	8.25
Coping with Stress	5.25	7.00	7.25
Focusing on task-concentration	6.50	7.50	8.25
Confidence	5.50	7.25	7.50
Positive Communication	7.25	8.50	8.75
Preparation and Readiness	7.00	8.50	8.75

Table 22

Intervention Effects: Combined Scores from the 360 Feedback for Elizabeth

		Intervention	
Quality	Pre	Post	Follow-up
Mental Toughness	7.00	7.75	8.00
Coping with Stress	5.50	7.25	8.25
Focusing on task-concentration	5.75	7.75	7.75
Confidence	5.75	7.50	8.50
Positive Communication	7.25	8.50	8.75
Preparation and Readiness	6.50	8.50	8.75

Table 23

Intervention Effects: Combined Scores from the 360 Feedback for Amanda

	Intervention		
Quality	Pre	Post	Follow-up
Mental Toughness	6.50	8.00	8.25
Coping with Stress	5.50	7.25	8.00
Focusing on task-concentration	5.25	6.75	7.00
Confidence	5.75	8.00	7.75
Positive Communication	5.50	8.50	8.75
Preparation and Readiness	6.50	8.25	8.25

Table 24

Intervention Effects: Coach, Other Player and Significant Others Mental Techniques Scores

	Overall Scores		
Quality	Pre-Intervention	Post-Intervention	Follow-Up
Coach			
Jessica	7.50	8.33	8.50
Mary	6.50	8.00	8.00
Elizabeth	6.50	7.67	7.83
Amanda	5.17	7.17	7.50
Other Player			
Jessica	6.33	8.00	8.67
Mary	6.50	7.83	7.83
Elizabeth	6.00	8.17	9.33
Amanda	6.33	8.33	8.00
Significant Other			
Jessica	8.33	9.00	9.00
Mary	7.33	8.83	8.67
Elizabeth	6.67	7.67	7.83
Amanda	5.67	7.17	7.50

Table 24 supports the findings in the overall use of mental skills (refer to Table 19) by participants as a result of participating in the intervention. In general, coaches, other players and significant others' scores were consistent with the scores participants rated.

.

Mental Skills Training Worksheets and Verbal Feedback

Throughout the study, participants were given worksheets (refer to Appendix M) to record their mental skills training practice. There was a worksheet for each exercise that participants were to complete as part of the intervention. Each worksheet was specifically designed to assist participants in gaining a better knowledge of, teach them to use and assist in gaining practical mental skills.

Participants were advised to send the completed worksheets to the researcher at designated times throughout the intervention, and the importance of keeping a record of progress and keeping on schedule with completing worksheets was emphasized. Overall, the researcher was impressed with the quality and thoroughness that the participants took in working through the worksheets. The researcher had meet individually with the participants where she explained thoroughly how to use the workbook/worksheet and provided introductory definitions and information on the mental skills within the workbook. Despite this introductory session, the researcher still envisaged that the participants might have problems using the workbook/worksheet. Therefore, it was interesting to note that the completion of the worksheets was generally well completed. Indeed, in certain areas where the exercises demanded more from the cases or was more technical the researcher needed to provide feedback. Specifically, cases generally needed assistance with worksheets 6, 11, 12, 16, 21, 22 and 23. Generally, the participants indicated through feedback during the interventions that even though completing the worksheets was sometimes inconvenient (e.g., time consuming or often didn't feel like sitting down and writing things down) they actually believed that working through the practical examples was useful. Specifically, they felt they did learn from actually writing out the exercises or doing the activities. In addition, the participants felt having a record to look back on was a

useful tool at reminding them of positive thoughts or key words, especially near the start of the intervention when they were not used to using such techniques. Indeed, the cases were encouraged by the researcher during the intervention to photocopy the worksheets or complete additional answers within the workbook for their own personal record.

In addition to the worksheets, verbal feedback relating to the Coping MSTP occurred during weekly phone conversations between the researcher and the participants. During the intervention the majority of the phone conversations were initiated by the researcher. Despite the lack of contact from the cases, the researcher did not infer that the cases did not have issues to discuss. This was clearly evident when the researcher would ring, as the participants would talk generously about their use of the Coping MSTP, seek advice, raise concerns about parts of the game that they needed assistance with and provide basic feedback on the intervention. In addition, the researcher would provide feedback on their worksheets and help them improve their use of the mental techniques. Usually during this time the participants would engage reciprocally.

Social Validity Questionnaire

When using behavioural interventions it is essential to determine whether the changes are both important and appropriate. More practically, do the participants see the intervention as worthwhile and maybe more importantly will these changes make a difference to their ability to cope. In addition, is the intervention seen as important and transferable to other hockey players. Social validation is one way of evaluating whether behaviour change is of applied significance (Kazdin, 1982).

Considering the above, a social validity questionnaire was administered to the cases as follow-up to the intervention (refer to Appendix S). This section will look at the results obtained from the questionnaire in two parts: the acceptability of the procedures and the satisfactions with the results.

Acceptability of Procedures

The first part of the social validity questionnaire, examined how acceptable the procedures of the intervention had been to the subjects. Specifically, the first section presents the results obtained from ratings of enjoyment of the procedures in relation to the coping skills taught during the intervention. The next section addresses how much the learning and practicing of the coping skills interfered with the cases' normal daily life and lastly presents findings with respect to how worthwhile the cases believe the coping skills programme would be for other competitive hockey players.

Table 25

Acceptability of Procedures for Learning Coping Skills: Enjoyment (Ratings)

Coping Skill	*Jessica*	*Mary*	*Elizabeth*	*Amanda*
Mental Toughness	7.00	7.00	7.00	8.00
Coping with Pressure	7.00	7.00	6.00	8.00
Concentration Skills	8.00	8.00	8.00	8.00
Confidence	8.00	8.00	8.00	8.00
Competition Planning	7.00	7.00	6.00	8.00
Communication	7.00	7.00	7.00	8.00
Self-talk and Thought Stopping	8.00	8.00	8.00	8.00

Enjoyment of Procedures

On a Likert scale of 1 (0 = Not enjoyable; 10 = Very enjoyable) cases rated how much they enjoyed the coping skill techniques (refer to Table 25). Generally cases found the procedures to be acceptable and this was reflected in the participants mean enjoyment of coping skills score: Mental Toughness of 7.00 (*SD* = 1.42), Coping with Pressure of 7.50 (*SD* = 1.00), Concentration skills of 7.75 (*SD* = 0.95), Confidence 7.75 (*SD* = 0.96), Competition Planning of 8.00 (*SD* = 0.82), Communication or 7.00 (*SD* = 0.82), and Self-talk and Though stopping of 8.25 (*SD* = 0.50). Overall mean enjoyments of coping skills score: Jessica (7.43), Mary (7.43), Elizabeth (7.14) Amanda (8.00) and total overall mean 7.14 (*SD* = 0.36). The most acceptable procedures overall was concentration skills, confidence, and self-talk and thought stopping. With coping with pressure and competition planning being the least enjoyable. However, both the participants' individual scores of each coping skill technique did not differ a great deal.

In summary, it can be implied that all the procedures were well accepted by the cases, with coping with pressure and competition planning obtaining the lowest acceptability scores. In addition, there was not much difference across the cases rankings either. However, Amanda found the procedures most acceptable, as she had higher ratings of enjoyment than the other participants. Elizabeth, found the procedures the least acceptable of the four.

Disruption of Techniques to Normal Daily Life

On a Likert scale of 1 to 10 (0 = Not much at all; 10 = very much) cases rated how much learning and practising the coping skills techniques disrupted their normal daily life. Individual scores for both learning and practising the mental skills range between 1-4. Although learning the mental skills was not a major disruption to their lives, scoring between 2-4, it did score slightly higher than practising the coping skills techniques, scoring between 1-3.

For both learning and practising the skills, it is evident that while, one case found both learning the coping skills techniques moderately disruptive to their normal daily life, the majority did not perceive it to be a major inconvenience.

Analysis of the participants' scores, showed that the majority of participants believed that the coping MSTP would be *very beneficial* for other competitive hockey players. Individual scores on worthwhile ratings range from 7-9 (0 = not at all beneficial, 10 = very beneficial). It is clearly evident that the Coping MSTP was worthwhile and would benefit other competitive hockey players.

Table 26

Satisfaction with Performance and Level of Improvement (Ratings)

Coping Skill	*Jessica*	*Mary*	*Elizabeth*	*Amanda*
Mental Toughness	7.00	6.00	6.00	9.00
Coping with Pressure	7.00	7.00	7.00	9.00
Concentration Skills	8.00	7.00	7.00	9.00
Confidence	7.00	7.00	8.00	9.00
Competition Planning	9.00	8.00	7.00	8.00
Communication	7.00	7.00	6.00	8.00
Self-talk and Thought Stopping	8.00	8.00	8.00	9.00

On a Likert scale of 1 (0 = Not satisfied; 10 = Very satisfied) participants rated how satisfied they were with their performance and level of improvement on the coping skill (refer to Table 26). Generally participants were satisfied with their performance and improvements on the coping skills and this was reflected in the participants mean enjoyment of coping skills score: Mental Toughness of 7.25 (*SD* = 0.50), Coping with Pressure of 7.00 (*SD* = 0.82), Concentration skills of 8.00 (*SD* = 0.00), Confidence 8.00 (*SD* = 0.00), Competition Planning of 7.00 (*SD* = 0.82), Communication or 7.25 (*SD* = 0.50), and Self-talk and Though stopping of 8.00 (*SD* =

0.00). Overall mean enjoyments of coping skills score: Jessica (7.57), Mary (7.14), Elizabeth (7.00) Amanda (8.71) and total overall mean 7.00 (*SD* = 0.77). Overall the coping skills the participants were most satisfied with were concentration skills, confidence, and self-talk and thought stopping. With coping with pressure and competition planning being the least enjoyable. However, both the participants' individual scores of each coping skill technique did not differ a great deal.

In summary, it can be implied that all the participants were moderately satisfied with their performance and level of improvements. In addition, there was not much difference across the cases rankings either. However, Amanda was the most satisfied with the her performance and improvements, as she had higher ratings of enjoyment than the other participants. Elizabeth, was least satisfied.

Individual Mental Skills Rankings

Participants were asked to rank (1 = most beneficial; 7 = least beneficial) their preferences for individual mental skills in how beneficial they were to their performance. Frequencies of individual mental skills were analysed to reveal the results. The highest ranked (level 1) skills were concentration skills (50%), confidence (25%) and self-talk and thought stopping (25%). The next highest ranked (level 2) included coping with pressure (50%), confidence (25%), and competition planning (25%). The next level ranked (level 3) included mental toughness (25%), concentration skills (25%) and confidence (35%). The lowest ranked (ranked 7) included communication (75%) and mental toughness (25%). It was evident that a large individual difference occurred for the rankings, however, concentration skills, confidence and coping with pressure accounted for the largest percentage in the first two rankings (level 1 & 2). Communication was the lowest ranked skill.

Evaluation of Performance and Ability to Cope Effectively

Analysis of the participants' scores, showed that the majority of participants believed that the coping MSTP changed their *performance*. Individual scores on performance ratings range from 6-9 (0 = not significant, 10 = very significant). It is clearly evident that the Coping MSTP was did improve performance moderately for Jessica and Mary and significantly for Elizabeth and Amanda.

Participant scores revealed that generally the participants felt that the Coping MSTP increased their effectiveness to cope during the duration of the intervention. Individual scores on the effectiveness rating ranged from 7-8 (0 = much less effective; 5 = no change; 10 = much more effective). It is evident that the participants felt their effectiveness increased moderately. Overall, the participants rated their coping skills as being moderate to excellent. Individual scores on coping skills rating level ranged from 7-9 (0 = not very skilled; 10 = excellent skills).

Participants were also asked if from their perceptions of the Coping MSTP contributed to a change in their hockey performance, could they explain why and identify specifically which coping skills or components of the workbook contributed to this change. Content analysis of participants written responses revealed that overall participants found the mental skills on coping with pressure, concentration skills, confidence and competition planning were most effective in improving performance. Specifically, Jessica felt that for her coping with pressure and concentration skills were the most beneficial to improving her performance, however she also found that self-talk techniques were very useful for helping her maintain her focus throughout the game, especially during critical moments. For example, *while coping with pressure is a big thing, now that I'm playing at higher levels, so assistance there was useful for me. Self-talk was really useful for focusing on what is important in the game, improved my ability to read the game and focus on the key things*. Mary found that learning how to cope with pressure helped made her feel more in control and able to deal with stressors when they arose. In addition, she found concentration skills useful e.g., *I sometimes struggle with maintaining my focus throughout the game, so I think the concentration skills component help me quite a lot*. Elizabeth found the coping with pressure was most relevant to helping her game and believed that competition planning helped her feel prepared and more confident in her abilities to perform. For example, *Personally, I found the competition planning really practical and useful for preparing for the*

game, yeah, it took some of the pre-game stress away. Lastly, Amanda, found competition planning, coping with pressure and confidence components of the intervention were particularly useful and she felt they enhance her overall mental toughness. *I've really struggled at certain times with my confidence, so I guess I found the confidence component worthwhile, plus competition planning and coping with pressure were also extremely useful since I play in the backs, which can place a lot of pressure on you at times.*

Results revealed that overall, participants found the critical moments in hockey, appraisal/reappraisal exercise, dealing with worry, controllability worksheet, concentration and critical cues worksheet, self-talk and positive affirmation, preparation plans practical and effective. One participant stated that she *found identifying the critical moments for concentration and creating critical help a lot. Although I found the content on worry was an effort, I did actually find it really worthwhile for me.* In addition, most of the participants found the competition planning really useful, especially the coping plan and easy to apply. Self-talk was identified as an easy skills to use and very effective.

CHAPTER FIVE

Discussion

The present study explored the issues central to coping in elite hockey and the coping needs of elite hockey players in New Zealand. The knowledge gained in the first two parts of the study were utilised to develop a Coping Mental Skills Training Programme (Coping MSTP) and provide valid, practical recommendations. Specifically, this chapter presents the findings of the study based on statistical analysis of both the raw data and qualitative data that was content analysed using a hierarchical inductive analysis. The presentation of the results comprises of nine sections. The first six sections relate to the design of the intervention. Specifically, the first three sections identify the stressful situations experienced, players' reactions to stressful situations and the types of coping strategies or combinations of strategies used by the athletes. The next three explore the difference in coping effectiveness and examine the relationship between coping strategy effectiveness, automaticity, and performance. The seventh section defines the Coping MSTP grounded in the findings from the first part of the study. Finally, the last two sections discuss the effectiveness of the Coping MSTP and provide further recommendations. To enhance the readability of the chapter and facilitate the reader's understanding of the results, both the qualitative and quantitative data are integrated and discussed simultaneously.

Coping was defined by Lazarus and Folkman (1984) as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). The transaction-process perspective believes that coping is a dynamic process influenced by an interaction between environmental and personal factors (Lazarus & Folkman, 1984), and where the individual simultaneously tries to manage the stressor, environment and his/her emotions (Gould, Eklund & Jackson, 1993). This investigation explored the types of stressors experienced, the relationship between coping effectiveness, automaticity, performance, coping strategies and anxiety within competitive hockey. Both qualitative and quantitative data indicated that there was a strong relationship between problem-focused strategies and coping effectiveness. Furthermore, in-depth

analysis revealed significant differences in how participants coped with stressful situations and supported the Hardy et al. (1996) Full Working Model of Coping in Sport (refer to Figure 2, page 28). Within the qualitative data, the participant categorised as a high coper reported a more successful coping outcome.

Stressful Situations and/or Challenges within Elite Hockey

Competitive sports, like elite hockey, provide an abundance of situations that could be potentially stressful. Using a process perspective, *stress* is viewed as "a (perceived) substantial imbalance between the demand and response capability, under conditions where failure to meet that demand has important consequences (perceived)" (McGrath, 1970, p. 20). Specifically, within this investigation the term 'stressor' refers to the source of stress (i.e., stressful situations).

This section discusses the demands of elite hockey and the stressor experienced by elite hockey players.

Demands of Elite Hockey

In the present investigation the major demands identified by participants (i.e., players, coaches & administrators) were, preparation, managing players' expectations, self-awareness, mental toughness, coping with pressure, cognitive thoughts, leadership, skill competency, personal issues, affect, reading the game, commitment, environmental issues (refer to Figure 3, page 80). The most salient dimensions were preparation, mental toughness and coping with pressure, personal issues, reading the game, commitment and, lastly, environmental issues. This supports previous findings (Gould, Eklund & Jackson, 1993; Gould et al., 1999; James & Collins, 1997; Orlick & Partington, 1988). The research confirmed that sources of stress or demands at the elite level and major competitions include concerns about a number of contextual factors. In the present study these were found to be organisation, media pressures, travel, competitive performance expectations, competition pressures and preparatory training. In particular, as with the present study, Noblet and Gifford (2002) found both competitive and non-competitive demands in professional Australian footballers. The

finding has important applied implications, which supports the Noblet and Gifford (2002) recommendations. They wrote that when developing stress management programmes or MSTPs, both competitive and non-competitive demands, and sources of stress, and demands need to be taken into consideration.

Specifically, the demands experienced by participants regarding the preparation dimensions, related largely to time management and organisational skills. Players had to juggle full-time work commitments with structured team training times, coordinate individual training (extra personalised fitness programmes) and attend promotional events etc. Hockey was found to place extra demands on players due to the array of technical skills involved and being an amateur sport in New Zealand. This brings even greater time pressures not found in professional sports, because of the need to work full-time. Thus, the non-competitive demands of team sports are commonly related to time commitment and organisational skills due to the extra coordination needed within a team environment (Noblet & Gifford, 2002).

The personal issues dimension for the participants involved aspects of looking after one's body, recovery, getting enough sleep (body tiredness), getting the right nutrition (importance of diet) and injury rehabilitation. Naturally, as the competitive demands of the modern game have risen, in combination with advances in sport science, the interest in physical preparation and conditioning (as well as mental) has become more important. To be competitive at an international level, such aspects are essential for optimal performance.

Environmental issues identified a number of demands related to the hockey and included the competitive environment, selection, access to competition, travel, accommodation and financial concerns. As New Zealand is rather isolated from other parts of the world, participants rued the lack of access to international competition and, to compete, needed to travel long distances, which provides a financial challenge to a relatively minority sport in a small country. As previously stated, hockey in New Zealand is not professional, although after the success in the 2000 Olympics the team has gained more sponsorship. However, financial demands are ever present and a major concern for the participants. In addition, there are more games in a season and the number of tournaments to be attended. Selection demands (i.e., in squads or playing

teams) emerged as a major stressor for participants. It is evident in the below quotes that the selection process, causes the participants interviewed stress, e.g., *don't cope being on the bench, especially worry about make the starting line-up*. In addition, the below quotes also identify the influence that selection and performance had on player's confidence. For example, players often felt *depressed, useless, not part of the team,* and even experience self-doubts, such as *doubt if I'm ever going to get back in the starting line-up*. As a result of spending time on the bench, one participant expressed that she began *to doubt* her *ability and performance concerns creep in* as a result.

In particular, all the participants worked full-time, some in professional jobs. Largely, the concerns were due to a loss of income while off work for hockey commitments; such concerns involved worrying about financial stability (e.g., *who's going to pay the mortgage*), job insecurity, and cost to employers as continually needing time off work for hockey commitments. Interestingly, Noblet and Gifford (2002) found similar sources of stress were identified for professional footballers, where they also found job insecurity a stressor. As with all professions, professional sport is based on performance. However, due to the high public profile of sport, job insecurity may be a major issue. Despite the similarities, in the present study, job security problems were due to time away from the job and not necessarily job performance. In addition, team cohesion is also a major stressor to the participants, and this issue will be discussed later in this chapter.

Recently, studies have examined organisational stress associated with competing in sport. For example there are a number of stressors that arise from social, organisational, political, occupational and cultural sources. The findings from the present investigation support previous research in organisational stress. Woodman and Hardy (2001) defined organisational stress as "the stress that is associated primarily and directly within which he/she is operating" (p. 208). They argued that issues directly related to sports organisations should also consider organisational stress issues (e.g., coaching styles). Indeed, the above findings from the present study on demands of elite hockey, all relate to organisational stress issues. Woodman and Hardy (2001) investigated organisational stress within sport. Similar to the findings in the present study they found environment issues (selection, training environment and finances),

personal issues (nutrition, injury, and goals and expectations), leadership (coaches and coaching styles), team issues (team atmosphere, support network, roles and communication). In addition, Fletcher and Hanton (2003) also found environmental issues (selection, finances, training environment, accommodation, travel and competition environment), personal issues (nutrition, injury, goals and expectations), leadership (coaches and coaching styles) and team (team atmosphere, support network, roles and communication). The present findings are consistent with the findings of (Gould, Jackson & Finch, 1993b; Fletcher & Hanton, 2003; Scanlan, Stein & Ravizza, 1991; Woodman and Hardy, 2001). The present findings particularly demonstrated that isolation and access to competition, and job security were obstacles. Both these findings are related to New Zealand hockey as a result of the geographical location and non-professional status of hockey in New Zealand. Although Noblet and Gifford (2002) also identified job insecurity as an issue, this investigation found different reasons for the perception of job insecurity. In the present investigation it was due to time away from the job, not performance related issues.

Of particular interest to the present study and to hockey, are the extra demands that were identified due to the game. Specifically, skill competency and reading the game were identified as demands of elite hockey. The review of literature reported that while hockey encompasses many of the components found in a cross section of sports, a notable difference between hockey and other team sports, is the degree of technical skills involved. Such demands also relate and contribute to other organisational stress (e.g., additional training requirements). To emphasise the array of dimensions to the game and demand to read the game (anticipate), the following personal communication is included:

> *"Hockey is such a diverse game, now days players have to be exceptionally talented at reading the game and anticipating the play. It is exciting because it is a fast, dynamic and uncertain game. The ball moves quickly constantly changing the dynamics of the game, one moment a team can be hot on attack then next moment they find themselves under extreme pressure on defense. Also the strong skill base of the game also makes it challenging, there are several different styles*

> *of hits, dribbles, flicks, pushes, and a variety of tactical formations, providing players with a real variety of technical aspects to grapple with. Naturally, such diversity makes hockey an extremely exciting spectator sport, as well as an exciting and challenging game to play."* (Personal Communication, P. Barwick, 2004).

In a study examining coping strategies of national athletes across 41 different sports, Park (2000) concluded that athletes who participated in team sports needed more coping strategies than those who participated in individual sports. The present study would suggest that an increased number of coping strategies could largely be related directly to increased demands of the team environment. Indeed, that finding emphasised the increased demands on participants in team sports such as hockey. The results of the present study also found that as a team sport, hockey presents an extensive range of demands for which players need a wide variety of coping strategies.

Stressors/Sources of Stress

Few previous studies have examined the sources of stress in sports, especially team sports. Noblet and Gifford (2002) identified a clear need for more studies to investigate the sources of stress experienced by those participating within a variety of team sports such as hockey. In the present study, participants provided their observations and experiences as to what they believed were the major stressors with which they have to contend in elite hockey. The present investigation identified the following dimensions: focus, cognitive content, performance issues, self-belief, confidence issues, communication issues, preparation, mental toughness, organisational skills, leadership issues and team dynamics (refer to Figure 4, page 90). It is evident from the present findings that elite hockey places players under substantial pressure, where a wide range of stressors were experienced. The findings of the present study are consistent with previous studies (Feltz, Lirgg & Albrecht, 1992; Gould, Horn & Spreemann, 1993; Gould & Weinberg, 1985; Madden et al., 1995; Noblet & Gifford, 2002; Scanlan et al., 1991), where common sources of stress included: concerns about losing, doubting

ability, worries about poor performance, having to be consistently good, interpersonal conflict, balancing sport and other commitments, having a reduced social life due to training demands, coaching styles, injuries and limited financial resources. It was noted also that the dimensions found within the present investigation were often complex and interrelated to other dimensions. For example, one of the coaches (Gillian) stated that often when stressors are experienced within the team dynamic dimension, such *as when a player is doing more than her role* and the whole team structure falls apart, such stressors are also related to the confidence dimension; and that some *players do too much because they don't have the confidence in each other*. Therefore, it is important in team dynamics that players have the confidence in each other as a team.

The *cognitive content* dimension was related to the expectations on players, coach centred thoughts (e.g., concern over coach's reactions), perceived unfair umpiring decisions, and assorted thoughts about worrying or concerns about a variety of issues (e.g., media pressure, injuries, opposition). Cognitive content was a prominent issue identified within the present study and was identified as a meaningful difference between the high coper (Megan) and low copers (Jane & Sarah). This finding will be discussed in more depth later in this chapter. Within cognitive content, results revealed that a number of the concerns were related to expectations and coach centred thoughts, which is consistent with previous findings. The coach, is a particular interest in team sports and the present investigation specifically found expectations of the coach, concerns about coach reactions, consequences of bad performance, and uncertainty about coaching decisions, as sources of stress. In addition, within the leadership issues dimension, coaching styles (incompatible coaching styles, coach putting excessive pressure on players) were also sources of stress to participants. This finding differs from previous research, which found coaches to be a source of social support for individual sport participants (Gould, Finch & Jackson, 1993). However, this finding is not replicated in this present study. This may also be the case for team sports, as Holt and Hogg (2002) also found that coaches were often perceived as a source of stress. In addition, they found that the widest range of coping strategies was used to manage coaches' punitive and negative communications styles. However, participants used social support as a key strategy for dealing with coaches by using other teammates for

support. The results of this study displayed that when a member of the team was unfairly treated (Megan), the whole team was negatively affected. This showed the support and closeness of the players within the team. Crocker and Graham (1995) reported that females use higher levels of social support than males to cope with competitive stressors.

Both Sarah (low coper) and Megan (high coper) identified the coach as a potential source of stress. In Sarah's case, the lack of coaching support was due to a perceived unfair treatment, lack of commitment and guidance by the coach. Additional demands placed on her by the coach caused her to experience stress. In addition, Megan also identified perceived unfair treatment by the coach as a source of stress. Holt and Hogg (2002) suggested that the majority of the coping efforts of participants in team sports are created by the team environment and subculture, rather than the psychological demands of playing the sport. Although there were a number of individual stressors found in this study (i.e., lack of focus, self-belief, and confidence etc), there were also many team environment and team performance issues. Such findings suggest that participants in team sports may be more susceptible to stress due to an increase in demands and complexity of stressors. Holt and Hogg (2002) suggested that a wider range of strategies are required in team sports due to having to cope with additional stressors perceived from the team environment.

Furthermore, the findings of the present study also suggest variation in how participants were able to deal with team environment stressors, such as the coach. The high coper in the present study (Megan) was able to cope effectively with the situation. Her understanding of the controllability of the situation and personality characteristics (high self-confidence, determination and strong attitude) enabled her to cope and overcome adversity, where she used *him as fuel for* herself. For example, *I can't control what he thinks but what I can control is when I get out there I'll bloody show him. You have a choice, don't you, you either let him totally destroy you or you use it as a 'I'll fucking well show you ya wanker'*. As identified within the previous quote, the coach has the potential to greatly affect a number of aspects of their athletes (e.g., emotional state, confidence, self-belief, performance etc.), and has the potential to *totally destroy* a player. Considering the pivotal role of the coach within a team, it is hardly surprising

that it has been identified as a stressor. The above quotes are the perceptions of the participants (similar to perceived unfair umpire decisions) and infer important applied implications to team dynamics and mental skills training programmes (MSTPs). Identifying the controllability of the coach's (or umpires) influence, cognitive restructuring, self-belief and confidence techniques and team cohesion issues are valuable in enhancing coping.

The coach was identified as putting pressure on players in the present study. This emphasised that the individuals' perception of the primary and secondary appraisal of the situation, and personality characteristics determine as to whether global stress results. It is well documented that excessive pressure leads to stress; if individuals perceive that they have an inability to meet the demand of any situation they will experience stress. However, not all stress is negative. *Eustress* (positive stress) appraisal is experienced when the perceived imbalance between demands and resources is optimally challenging (Selye, 1974). On the other hand, *distress* (negative stress) is probable when the perceived demands of the situation significantly outweigh the perceived resources. For example, Megan (high coper) discussed the pressure put on players by the current coach, but appraised it as eustress – *I know with our New Zealand coach, he always liked putting everyone under pressure all the time. He like to drive people to see how far he could push them and I guess in a way that is good because he was always challenging people and to get better you have to be challenged.* To compete at an elite level, athletes must be able to cope with a wide range of stressors such as those identified within the present study.

The self-belief dimension related to players' negative pre-game thoughts, concern about being taken off, concern about making the team/starting line-up, doubts about performance, doubts about ability, concerns about losing and doubts about preparation. For example, a New Zealand player (Tessa) made the following quote *stresses before the game are the normal ones. Have I done enough, am I prepared? Can I play the way the team wants me to? Am I going to be able to do my job on the field? What if I get out there and it all goes to custard? What if I play rubbish? Will that be my last game? If I play rubbish will I get subbed off and then what happens?* Previous research (Feltz et al., 1992; Gould, Horn & Spreemann, 1983; Gould & Weinberg, 1985)

also identified concerns about losing, doubting ability and worries about poor performance as competitive sources of stress. Confidence issues were also identified as sources of stress. These included relating to previous performances, having a lack of confidence and also older team members not having confidence in the younger players. In particular, participants expressed throughout the interviews that confidence plays an important role in performance and they viewed a lack of confidence as being directly detrimental to both the individual and team performance. Past performances and confidence in the team (e.g., *have the combinations developed)* was viewed as central factors in performing favourably. In addition, the younger players expressed a lack of trust and confidence by the older players as having a major impact on their performance and was stressful for new players in the team. When older players' didn't communicate effectively with them, or didn't have the confidence to *give them the ball,* they stated that it made them feel *not good enough* and viewed it as being detrimental to their confidence within the team e.g., *especially for a new cap it drops your confidence.* Confidence plays a vital role in sporting success and athletes high in sport confidence have a strong belief in their ability to succeed in sport. Hence, consequently they usually cope well with adversity and stressful situations (Burton, 1988; Cresswell, 1999; Hardy & Jones, 1990; Loehr, 1986; Vealey et al., 1998), and supports the notion that confidence is important in the coping process (Prapavessis et al., 1992; Cresswell, 1999).

Within the preparation dimension, sources of stress related to players feeling under-prepared for the conditions, difficulties with playing in overseas tournaments if outside the New Zealand season and an overall lack of readiness. Lack of preparation was a generic stressor identified across all participants and was expressed largely through it's influence on performance, self-belief, confidence and cognitive content. In general, participants were stressed when they lacked preparation, whether it was being physical unprepared or a poor warm-up that caused them stress. When feelings of being under prepared were revealed, most of the participants believed they weren't capable of coping with the stressors that arose. For new caps, there were general feelings of a lack of readiness, being unprepared for the conditions at the international level and pressures related to being in a new team. For example, *"I'm ok if physically prepared but when*

you feel under-prepared makes you worry. Especially because as a new player you feel under pressure already, with things such as all the set moves, knowing what to do in a new team is already stressful. I used to get stressed out every time I'd get the ball." (Kate, Player). This research supports the notion that if athletes are prepared for competitions, it removes some of the stress involved in elite competition, and help enhances feelings of confidence. Pre-competition preparation also plays an important role in minimising stressors and assisting athletes to cope more effectively (Bull, 1995).

Naturally, within team sports, team dynamics are crucial to the success of the team. However, as identified above, team dynamics does have the potential to create stress for the members of the team. Team dynamics was referred to by the participants as *how well the team gets on* and was viewed as an important aspect across most of the participants. The majority of the stressors identified by the participants who were interviewed related to the performance of others, such as issues around *roles*. For example, if players were not fulfilling their roles within the team or players were doing more than their designated role, they found that the team structure fell apart. For example, *"only get too stressed when things on the field aren't going right, like our structure at the back for some reason not working or it's really really tight and you are just throwing the ball back to the opposition. So I think come on what are you doing? And I suppose after the game. I'm both annoyed at other players and stressed at other players because the players aren't doing their job. I get very frustrated when you talk about that kind of situation where you are 2-1 up and there is 5 minutes to go and we have talked about what we should be doing and people don't do it."* (Tessa, Player) As a result this could lead to a breakdown within the team and often even was destructive when poor or a lack of communication was evident. The above quote also highlights the importance of communication in providing cues for reminding other players to perform coping strategies when necessary. It was evident that although the players had pre-planned what to do in certain situations, such plans were not always automatically executed under pressure. Communication within the team was also identified as an important part of team cohesion and the overall dynamics of the team. Previous research has found that female athletes tend to be more satisfied with female coaches (Fasting & Pfister, 2000) because of difference between men and women in communication styles.

Communication was found to be an important aspect of women's hockey. In further support of Fasting and Pfister's (2000) finding, the lack of feedback/communication and coaching style were identified as major stressors for participants (where a number of the coaches were male). In addition, results revealed that communicating or seeking advice from other teammates is an important social and emotional support for female athletes.

The most prominent sources of stress experienced included worrying about the importance of the game, their abilities, throwing a bad pass, missing the ball or missing a goal, what my coach(es) would think or say, what my teams would think or say, how good the opposition where, the level of competition, other players not doing their job, and appearing not to perform up to my potential or to perform a technical skill correctly. Participants worried the least about the competition venue, scheduling or games, team management, crowd, presence of television cameras, the media, the clothing or shoes they were wearing, lack of sponsorship, what was happening at home, and appearing unattractive. Some of the findings, particularly the findings that participants worried least about media and television cameras, may be due to the lack of media coverage on the National Provincial Hockey Championships. Plus the lack of sponsorship at a provincial level may not be as much of a concern as it would be at New Zealand level. Indeed, these findings were consistent with the findings of the qualitative findings. Some differences were concerns about opposition, importance of the game, and not performing technical skills correctly. In addition, findings revealed that participants found umpiring decisions, playing with injuries or not being fit to play, playing in important games and team conflict or negative team communication as the most common stressful experiences the participants encountered prior to or during competitive hockey games.

The present study revealed through factor analysis that participants major sources of stress related to concerns about (a) ability/skills; (b) appearing untalended/underskilled; (c) not living or performing up to potential/expectations; (d) handling the pressure (e) performing technical skills; and (f) readiness.

In summary, it is obvious from the present investigation and previous research, that preparing for competitive sport, particularly team sports, places athletes under substantial pressure, where a wide range of stressors are experienced. Although competition is the most salient part of athletes' sporting experience, it is only one part of

the overall experience. The findings support the Noblet and Gifford (2002) recommendation, that when developing stress management programmes, both competitive and non-competitive sources of stress need to be considered. The present findings demonstrated that athletes in team sports need to acquire a wide range of coping strategies in order to deal with a variety of stressors.

Reactions to Stressful Situations and Challenges

What happens to an athlete (i.e., stressful situation and person-environment demands) is not as important as how they react. To understand stress and the coping process it is vital to recognise the influence of both primary and secondary appraisals. Individuals can react in a variety of ways (Lazarus & Folkman, 1984). For example, they can perceive the stressful situation or demand as a threat or a challenge. In the present study quantitative data revealed that when confronted by stressful situations, 25.3% of participants felt challenged by the situation, 14.9% accepted the situation (meaning that they accepted it had happened and moved on), 13.2% felt panicked and 12.1% perceived that the situation was manageable. In addition, a small percentage of participants felt threatened and lost their confidence, while others were focused or felt annoyed. In general, the majority of the participants' felt challenged. That is, they perceived the stressor to be difficult but anticipated gains would be made (Lazarus, 2000). A large number of participants also perceived that they could manage, were accepting of the situation, as they accepted the situation happened and moved on. However, a number also felt panicked by the situation and a smaller number also felt threatened. That is, they perceived the situation as being potentially harmful (Lazarus, 2000) and lost their confidence, or became annoyed. As previously stated, the way an individual appraises a situation greatly influences the effectiveness of the coping outcome.

Overall, the participants believed that players' reactions to stressors are individual to each player. As the findings of the present study reveal, there are a number of individual differences in the way players appraise and usually react to a stressor. The participants (players, coaches & administrators) believed that players reacted in one of three ways: a) the player copes effectively and is able to maintain optimal performance

b) the player becomes outwardly unsettled or c) the player withdraws inwardly. In team sports, the manner in which individuals' cope or do not cope, has major ramifications for the team's performance and cohesion. While it was acknowledged that players are able to cope effectively with stressors and maintain optimal performance, several experienced players still reacted negatively to stressors. For example, *"It is really unsettling when one of the more experienced players lose their composure, It obviously means that they aren't coping with the situation or a stressor etc., and often directly effects the team's performance. Not only does their performance drop but quite often they yell at you as a direct result of losing their composure, which also effects your game as well."* (Tessa, Player). Such findings support Lazarus's (2000) recommendation that it is important for researchers and applied sport psychologist to systematically documents the individual variations in athletes' coping behaviours. Although there was an evident lack of knowledge on coping strategies, the present study found that participants' used a multitude of coping behaviours (i.e., appraisals of situation and corresponding coping strategies) were used by individuals when confronted by varying demands and stressful situation. One of the strengths of the present study was the knowledge and the greater understanding the researcher gained from the first two parts of the study. Such knowledge inevitably meaningfully contributed to the overall success of the intervention. The benefits of understanding the types of stressors athletes' experience and the coping behaviours used can ensure that mental skills training programmes are more effective in facilitating effective coping, which is beneficial to both the applied sport psychologist and the athletes. To illustrate, the researcher will use the example of mental toughness. Certain mental skills and techniques taught in the intervention were designed to help enhance mental toughness among other things. However, through initial pilot interviews the researcher found a distinction between the general definition of mental toughness and the specific dimensions that the participants talked about. For example, mental toughness was not just about dealing with critical moments in the game; it also incorporated training and general lifestyle dimensions. It was through such interviews that the researcher was fully able to understand that the importance of effectively coping with training, competition, work, social and personal demands was important aspect of being mentally tough for hockey players. Indeed, qualitative

research assists researchers in gaining an in-depth understanding of athletes' personal constructs and experiences.

The participants considered that if a player becomes outwardly unsettled, it had a negative influence on the team's performance. Participants defined players who become outwardly unsettled, as individuals who often elicit one or several of the following reactions: panic, get upset, lose their temper, and/or yell at umpires or other players. For example, *"Often people react by panicking on the field and you can tell by the tone of their voices or the way that people are talking. However, others go quiet and don't talk. Generally if it is noticeable to others it is a concern for the team, especially if someone is panicking, because often the team actually begin to spiral downwards on our play"* (Vanessa, Player). In addition, the participants tended to view withdrawing inwardly to also be mainly a negative influence on performance. Although, it has less of an effect on influencing other players' performance, it isn't really productive to team performance either. The main issue that the participants' believed was a disruption to the team was that the affected player fails to communicate with the other players. All participants' believed that a breakdown in communication was detrimental to team cohesion. The participants defined withdrawing inwardly to be one of the following characteristics: distracted, stop communicating/talking on field, display a lack of awareness, want to substitute off the field or voluntarily do so.

Previous research also showed that stressful situations can directly affect athlete's performances, such as less ability to focus attention, less risk taking, narrowing of focus, and reductions in mental preparedness to perform (Anshel, 1990). The investigator identified the influence on hockey performance by increased arousal and state anxiety was due to changes in attention and concentration (Nideffer, 1976; Williams & Elliott, 1999). For example, *"Sometimes you notice players missing the ball, they're just not with it. Like not listening to the calls, yeah and just not onto it, not in the right place at the right time. Which is a good sign that someone is distracted and has got their mind elsewhere." "Sometimes players miss a tackle because they are not up there in the right position. Generally, if someone is not in the right position, that can often be because they are not sharp, onto it, awake, or alert."* (Sonya, Player). Consistent with the findings of Landers, Wang & Courtet, (1985) the examples showed that when

players arousal was increased they tended to scan the environment less by narrowing their attention and often miss relevant cues. For example, the above opposition player may have been unaware of the other players' intentions, and as a result, failed to be in the right position to receive the ball. The above quote highlights the need to integrate the knowledge of arousal, stress and anxiety when providing practical implications.

Differences between low and high copers

Significant differences were found in how Jane and Sarah (low copers) responded to stressful situations when compared with Megan (high coper). Although Jane and Sarah's responses differed in semantics, there were some key similarities. It should be noted that such differences in reactions could have been due to the differences in stressors experienced. Specifically, Jane tended to become defensive, had an inability to let go of mistakes, was preoccupied by thoughts of the stressor and felt down about the situation. On the other hand, Sarah suffered from somatic anxiety, would panic, her mind often went blank, she felt unable to breath and would experience over-active sensation, such as *running on adrenalin* and overreacted. Despite such differences, both Jane and Sarah reacted negatively to the stressor (i.e., adverse reaction), reactions were detrimental to their performances (i.e., became hesitant (Jane) or poor-decision making (Sarah)), and experienced negative thoughts and/or self-talk.

A common theme to both Jane and Sarah's reactions related to cognitive content (i.e., what are they telling themselves about such comments that make them react this way?). In particular, Jane's inability to let go of mistakes was related to her lack of confidence and her cognitive content. Specifically, Jane stated that she *convinces* herself that she is *useless, weaker than the others* and *freaks* herself *out.* Indeed, Jane and Sarah experienced negative thoughts and/or self-talk. In addition, Sarah would often say to herself *You're stupid, why did you do that, you know you are under stress why didn't cope better.* Jane attempted to use self-talk to try and deal with negative thoughts, but her use of self-talk was ineffective. For example, to ignore the comments of others, she used self-talk (i.e., *don't listen),* but it was ineffective as it was negatively framed. Negatively framed self-talk is counterproductive because, in essence, it causes one to focus on listening (what not to do). Self-talk should be positive and reflect what the

individual should be doing instead of what he/she shouldn't be doing. Although Jane realised that it was not beneficial to listen to others' comments, she was unable to ignore them. Continual thoughts about such comments influenced her mood, confidence, concentration and overall performance. It is evident that Jane's inability to react positively to stressful situations influences her thoughts and feelings. Jane experienced negative thoughts and self-talk that she was unable to control. Due to a lack of confidence, she tells herself that she is *useless* and *weaker than the others*. From an extensive review of previous literature, Greenspan and Feltz (1989) concluded that cognitive restructuring interventions were extremely effective in improving performance in competitive situations. Indeed, the results of the present study suggest that both Jane and Sarah would benefit greatly from cognitive restructuring techniques. Through identifying the cause of the problem and getting them to think more positively, it is envisaged that positive changes in behaviour and coping outcomes would result. Indeed, it appears that positive or adaptive responses to stressors is strongly influenced by an individuals positive appraisal of the situation and/or interpretation of one's environment (Scheier & Carver, 1993).

Sarah finds that when it is an important game, she becomes excessively nervous, e.g., *really really nervous* and experiences symptoms like the frequent need to urinate during pre-game preparation. Stress begins with a primary appraisal of the stressor, where the personal significance of stressor ("How important is the game") and what effect this stressor will have (e.g., "What is at stake") is evaluated to determine if the situation is potentially stressful. As with previous studies (Dugdale et al., 2002), and consistent with the present investigation, it is evident that the importance of the game increased Sarah's symptoms of stress. In support, Sarah believed she suffered from tension caused by *wanting to win* and such pressure caused Sarah to panic and often choke. When this occurs, Sarah plays what she refers to as panic type hockey. Hence, she is unable to make good decisions, often stops breathing, her mind goes blank and when she receives the ball, she tries to get rid of it immediately (i.e., panics). It is evident that Sarah suffered from both somatic and cognitive anxiety. To help Sarah cope more effectively she must learn to regulate her arousal levels (e.g., relaxation techniques).

In contrast, Megan (high coper) rarely was overly stressed and tended to react positively to stress. Specifically, Megan appraised stressful situations as *eustress*, and perceived them as challenging. Her ability to always regain her composure and recover from a poor performance patch, reflected her confidence and self-belief in her abilities. In particular, when Megan experienced adversity she preferred to *get stuck in* to overcome such situations. Megan believed that you can't let stressful situations get to you, you just have to keep doing the hard yards and, if you make a mistake, focus on the next thing and do that well. She concentrated on focusing on simple tasks, rather than worrying about the big picture (e.g., focus on successfully receiving the ball rather than worrying about the score, etc). Megan believes that her reactions to stressors and positive reinterpretation allow her to cope better, especially if she doesn't dwell on a mistake, and is able to keep playing her part in the team and perform well.

Coping Strategies

Stress is one of the most salient factors facing athletes. Therefore, they need to possess a repertoire of cognitive and behavioural coping skills to manage competitive stressors (Gould et al., 1999; Crocker & Graham, 1995; Madden, 1995). As previously reported in this chapter, the present investigation identified a wide array of stressful situations and demands with which elite hockey players have to contend. Results indicated that hockey players need a wide variety of strategies, used in combination to deal with such stressors. Park (2000) stated that athletes who participated in team sports "require more coping strategies than the other individual sports" (p. 74).

Knowledge on Strategies to help Players Cope with Stressful Experiences

A notable finding within the present investigation was the general lack of understanding on strategies to help players cope with stressful experiences. Some of the players, even though at international level, did not show adequate understanding of strategies to assist coping with stressful experiences. For example, *"I must have heard what coping strategies there are around the place but I couldn't tell you what they are*

*off the top of my head." (*Vanessa, Player*).* The findings of the present investigation revealed a significant need for assistance in mental skills training. Some participants were unaware that they even used coping strategies and other participants were using coping strategies ineffectively. Therefore, a need for assistance in mental skills training for New Zealand hockey players was identified. Despite a general lack of knowledge, two players and coaches displayed a good knowledge of basic sport psychology principles and strategies. Also, they were aware of the following coping strategies: planning and preparation, goal setting, cue words, relaxation, visualisation and 'what if' scenarios.

A distinct difference between the low copers (Jane & Sarah) and the high coper (Megan) was a significant difference in the knowledge and use of coping strategies. Where Megan had an extensive knowledge and utilised numerous strategies or combination of strategies, Jane and Sarah only had a limited knowledge despite using a number of strategies (and in some situations, ineffectively).

Coping Strategies or Combinations of Strategies

In relation to the coping process, coping strategies are the cognitive and behavioural actions made in reaction to the cognitive appraisal of the situation (Lazarus & Folkman, 1984). The present findings found that the major strategies used by the participants were refocusing techniques (i.e., specific focus on immediate task/concentrate on own game), positive affirmations/positive self-talk, relaxation/centering, communication, visualisation, goal setting, thought stopping techniques and enhance positive team environment. It must be noted that a small number of participants had no strategies for coping during competitive hockey games. Although findings of the present study were consistent with previous research in individual sports (Giacobbi, Foore & Weinberg, 2004; Gould et al., 1993a, Gould et al., 1993b), the inclusion of communication and enhancement of a positive team environment were unique to team sports. In addition, an absence of pre-competition preparation was noted, which is inconsistent with previous research. The types of stressors reported, and the low level of strategies used by participants in the present study, supported that there was a general lack of knowledge and understanding of coping strategies.

Differences between low and high copers

To summarise the findings, visualisation was the most salient strategy for Jane (low coper) and was used often in combination with cue words and goal setting. Visualisation and cue words were considered as both problem-focused and emotion-focus because they focused on regulating emotional responses, such as increasing confidence. Hence, they helped solve the problem and enhance performance. The predominant coping strategies were used to enhance confidence and regulate emotional responses (i.e., release tension). In addition, Jane innately sought emotional support and ignored the stressor as coping strategies. Sarah (low coper) reported using a number of different coping strategies that included visualisation, self-talk, breathing (relaxation), positive communication and time-out (removing from the situation). Most of the strategies were focused on effectively coping with the situation (i.e., trying to relieve or prevent the stressors from occurring). One the other hand, time-out was focused on avoiding the stressor rather than dealing with the problem. Although avoidance strategies can be useful for overcoming performance stress (i.e., prior to the game), it is unlikely that rapid open-skilled sports, such as hockey would be beneficial as they interfere with the task at hand. Indeed, further exploration on the use of avoidance coping in team sports is needed in future research. Megan (high coper) reported numerous different coping strategies. These, included awareness of factors that influence her performance, learning from previous experiences, recording debriefs in a diary, pre-game preparation and planning, visualisation, relaxation and arousal control, refocusing techniques, goal setting, key words and positive affirmations. Predominantly, these strategies were problem-focused, and identified and dealt with the controllable aspects of stressors. Past research suggests that problem-focused strategies may contribute to long term management of stressful situations. In particular, Megan displayed a good awareness of herself (e.g., arousal levels) and prepared diligently for competitions, which enhanced her ability to cope.

Compared with Megan who predominantly used problem-focused strategies, Jane predominantly used emotion-focused strategies. However, the latter were used in combination with problem-focused and avoidance-focused strategies. Lastly, Sarah used a combination of problem-focused and avoidance focused strategies. The use of

avoidance focus is an important distinction between Megan and the others. Avoidance-focused coping represents efforts to behaviourally or mentally disengage from the stressful situation (Endler & Parker, 1990). Typical avoidance strategies were (a) ignoring the stressor and (b) time-out (either mentally or behaviourally). In particular, using a strategy such as Jane's ignoring the stressors or Sarah's use of time-out, are avoidance-focused. These can be used to deal with external stressors that cannot be controlled by the player, thereby helping them to concentrate on the controllable factors of the situation, such as in Jane's situation. However, such strategies are only a short-term measure and fail to prevent such situations being repeated (Roth & Cohen, 1986). They are preferable strategies when emotional resources are limited, the sources of the stress are not clear, and the situation is uncontrollable. In the present study, the low copers regularly used avoidance-focused strategies and rarely combined them, or they ineffectively combined them, with another strategy (e.g., negative self-talk). In this instance (e.g., negative comments from others), Jane would be better to learn how to reinterpret the comments positively (cognitive restructuring) and prevent the adverse effects such comments have on her confidence, mood and performance. She reported constant thoughts about such comments and subsequent negative thoughts related to the comments, which indicated that her strategy of ignoring the stressor was ineffective. To prevent negative thoughts, thought-stopping techniques could also be applied. Time-out (removing from the situation) as a strategy can be ineffective as sometimes, removing yourself from the situation, as in competitive sport is not always an option (i.e., hard on defense). Although this strategy doesn't solve the problem, it can be a useful technique. For example, it could assist with dealing with conflicting situations, such as walking away from an umpire when a perceived unfair decision is given. Despite such usefulness, it is only provides short-term relief. Indeed, avoidance-focused coping is not necessarily ineffective, as it reduces stress and is often useful during an initial period to decrease stress in the short term (Roth & Cohen, 1986).

Although Megan predominantly used problem-focused strategies, like Jane, she also used emotion-focused for emotion regulations. Specifically, self-talk techniques such as key words, motivational words and positive affirmation played a vital role in Megan's performance. In contrast, Megan's use of self-talk was both problem focused

and emotion-focused. For example, she used self-talk for refocusing, enhancing self-belief and for regulating emotions. However, unlike Jane, Megan was trying to enhance her emotions (e.g., motivational words – 'desire') rather than control her emotions. Interestingly, Sarah did not use emotion-focused strategies. The researcher found this surprising, considering the high cognitive and somatic anxiety that Sarah experienced.

Megan actively prepared for competitions and believed that coping strategies were about awareness. For example, *if something does start happening again like that [something that's happened before] you know what you are going to do to counteract it.* Techniques that Megan used to assist with awareness were to revisit past situations and learn from the experience, and devise a strategy to deal with it in the future (active coping). In addition, Megan recorded a debrief of the game in a personal diary, would assist in revisiting experiences, contribute to learning and also assist with planning and preparation for future games. The concept of awareness and lack of preparation are two of the defining factors that differentiated between the low copers and high copers. Although Sarah had never played for New Zealand, she had the same level of playing experience at the National Provincial Championships (NPC) tournament as Megan. Due to her experience, one would envisage that she would learn from previous experiences. Despite the fact that Sarah also used a number of problem-focused strategies, she was still unable to cope. Indeed, Sarah failed to have an adequate awareness of how to control her arousal levels. Although she identifies that she is nervous (awareness of arousal levels) and tries to focus her attention on her breathing *Just breathe*, such a strategy is reactive. It would be more beneficial for her to use relaxation techniques to prevent becoming over anxious. Before the game, on the other hand, Megan is aware of her arousal levels and likes to be at that *nice balance where you are not too anxious but you were a bit excited.* In order to control her arousal, Megan likes to relax, listen to music and even talk to another player before the game. When on the field, Megan believes that *it just happens* and appears to be in a state of flow. Indeed, achieving an ideal performance state is important to performing optimally. Being able to achieve an ideal performance state implies that Megan was aware of her arousal levels and could find the optimal level of arousal for her (i.e., balance where not too anxious but bit excited).

The coping strategies of both Jane and Sarah were used largely throughout the game, whereas a large number of Megan's were involved in pre-game preparation. In addition, Megan utilised strategies to enhance her performance more than the low copers. During the pre-game team talk, Megan becomes *aware* of what she has to do. Therefore, afterwards, she would write down in bold, three key points and would use those key points as *key words* within the game. Megan also used such words as a focusing technique, to concentrate on what she had to achieve. Indeed, Megan emphasised the importance of going into a game with certain goals she wanted to achieve.

The strategies used by Megan display her personal resources and reflect her high level of confidence and low level of anxiety. However, a lack of confidence and self-belief were major influences in both Jane and Sarah's inability to cope. Megan believes that self-belief and enjoyment are major factors in performing optimally. For example, she stated, that personally she always told herself that "*you should always believe in yourself and what you can do and enjoy being out there.*" Megan believes that players put enough pressure on themselves and that she played her best when she enjoyed playing. Previous investigations have linked an athlete's age to the use of problem-focused coping strategies (Madden et al., 1989) where older athletes had the experience necessary to employ problem-focused coping. The present investigation supports this finding as both Sarah and Megan (more experienced) used more problem-focused strategies when compared with Jane (little experience).

In summary, Megan reported numerous coping strategies. Predominantly, these strategies were problem-focused, identified and dealt with controllable aspects of the stressors, and were used to enhance performance. Findings from the present study, support past research (Dale, 2000 Gould et al, 1993), and suggest that problem-focused strategies may benefit long term management of stressful situations (Roth & Cohen, 1986). Specifically, Dale found that active coping technique, such as being aware of cues related to the task were found to be prominently associated with memorable performances. In particular, Megan displayed a good awareness of herself (e.g., arousal levels) and prepared diligently for competitions, which enhanced her ability to cope. In contrast, Jane and Sarah used a combination of strategies that were used to enhance

confidence, regulate emotional responses (i.e., release tension) and prevent the stressors from occurring.

Previous research has shown links between sources of stress with coping strategies (Dale, 2000; Gould, Finch & Jackson, 1993; Holt & Hogg, 2002). Holt and Hogg (2002) studied a National Women's Soccer team and found plausible linkages between specific sources of stress and coping responses.

Differences in Players who Cope Effectively vs Ineffectively

Coping Outcomes

Due to the complexity of coping and stress, assessing the outcome and effectiveness of coping strategies has been somewhat controversial (Hardy et al., 1996). Coping outcomes have previously been measured in a number of ways, such as the removal of negative products of the stress process, performance, satisfaction and affect. The present investigation asked the low and high copers an open-ended question (e.g., "Describe the effectiveness or ineffectiveness of the strategies you have talked about?"). In addition, the coping effectiveness of participants in the quantitative investigation were measured on one item to rate their coping effectiveness and measured their perception as to whether their performances were affected or not. When responding to the open-ended questions, the low and high copers refer to coping effectiveness in relation to the stressor encountered and the influence on performance. As previously identified, Megan (high coper) utilised coping strategies to enhance performance more than Jane and Sarah (low copers). Consequently, Megan reported that her coping strategies were more effective and impacted positively on her performance more than those adopted by Jane and Sarah.

It is important to note the potential benefit that effective coping strategies can have on participants. Specifically, coping situations or 'episodes' have the potential to provide valuable feedback (e.g., revisited previous situation) that contributed to learning from the previous experience to assist in coping with future stressful situations, and provided positive outcomes (e.g., enhanced confidence). The present investigation also indicated that confidence enhanced participants' abilities to cope. This also raises the

need for caution, because unsuccessful coping outcomes or ‘episodes’ may result in decreased confidence and negatively influence a participant’s future ability to cope.

Although the low copers found the coping strategies they used to be beneficial, they were somewhat limited in their effectiveness. Thus, is probably due to the use of relatively short-term benefits of some of the strategies (i.e., avoidance-focused). The benefits of using strategies often were reported for alleviating athletes’ mental states and not for enhancing their performance. Megan (high coper) more consistently reported positive outcomes and used strategies aimed at enhancing her performance. Such outcomes may have been due to her consistent use of problem-focused coping strategies. The present findings support past research that problem-focused coping strategies provide long-term benefits when compared with emotion-focused or avoidance focused strategies (Roth & Cohen, 1986). Sarah (low coper) also used various coping strategies, which could be due to her experience. However, both the low copers used problem-focused strategies in relation to skill acquisition (e.g., improving technical skills). For example, Sarah perceived that self-talk was particularly beneficial to correct technical problems in her game. She stated that if she had *stuffed up a tackle really badly*, she would break it down (identify the problem) to know what to do next time. To assist in preventing herself from making the same technical fault, she would use cue words as reminders of what to do in the next tackle.

The ability to focus/refocus was identified through quantitative analysis as the best predictor of the effectiveness of coping strategies and performance. This has important implications for future applied work in sport psychology. Such findings indicate the usefulness of incorporating attention/focusing techniques in Coping MSTPs. This finding is supported by previous research which have found that focus/attention were essential requirements for optimal performance and mental toughness (Hanton & Connaughton, 2002).

All participants’ found that their coping responses were automatic or occurred *naturally*. Gould, Eklund & Jackson, 1993) suggest that practising coping strategies would enable athletes to respond automatically in a stressful situation. However, the present results did not suggest that applying coping strategies automatically were related to practising, or reported to be beneficial to coping outcomes. These differences could be

related to the type of coping strategy used or individual differences of athletes. For example, Jane responded automatically to certain stressors by joking. Although such a response is automatic, this could be a nervous reaction to relieve tension caused by the stressor. Although Sarah (low coper) usually found her coping strategies came automatically, when she was really stressed she had to *consciously think* about what was happening. Specifically, her initial appraisal of the situation was often *'Oh my god this is bad'*. Then she re-appraises the situation as *OK let's deal with it, we know how to deal with it.* None of the participants actually practised mental skills such as visualisation. For example, Jane stated that she used visualisation when thoughts of hockey come to mind. Megan perceived her coping strategies to be both automatic and effective because they suited her personality (e.g., enjoyed being challenged).

It is important to note that, generally, both low copers and high copers were aware of external factors influencing their ability to cope effectively. Megan (high coper), in particular, had a very good understanding of the factors that she could control and the factors outside her control. Her use of coping strategies reflected this in that they predominantly were matched to factors she could control. This finding is consistent with the Hardy et al. (1996) 'Goodness of fit' notion, where the *properties* of the appraisal 'fit' the situation (e.g., are elements of the situation controllable?), or that the strategies 'fit' the appraisal (e.g., are the coping strategies focused on the controllable elements of the situation). It was evident that Megan's coping strategies focused on the controllable elements of the situation. Although Jane and Sarah were aware that some of the stressors they experienced were outside their control, their use of coping strategies and how they applied them were ineffective. It should be noted that Sarah did struggle at times to deal appropriately with external stressors (i.e., umpires), which was surprising due to her experience, and failed to use strategies that focused on controllable factors.

In general, the coping outcomes reported by the participants could be categorised as performance enhancement, skill acquisition and emotion and/or related coping outcomes. The performance and emotion related coping outcomes are similarly related to Hardy et al.'s (1996) full working model of coping in sport.

Personality Characteristics and Support

There were large personality differences between the low and high copers. Specifically, the two groups varied in their self-beliefs, confidence, perceptions of stressors and general attitudes. Both the low copers experienced negative thoughts about their abilities. In addition, Sarah experienced high somatic and cognitive anxiety, which was detrimental to her decision-making. Such a finding is consistent with previous research (Landers, Wang & Courtet, 1985). Jane internalised a lot of her feelings associated with negative comments from others. These greatly affected her mood, lead to self-doubts, caused hesitancy in her game and was detrimental to her performance. It is not surprising that both low copers sought social support as a coping strategy. However, the type of support differed with Jane seeking emotional and Sarah instrumental. A notable finding that has applied implications for MSTP, was the importance of managing players' expectations and setting realistic goals. In particular, when setting goals, players should avoid setting goals for factors outside their control (e.g., selection). Jane's disappointment and failure to make her goal contributed greatly to her feelings of inadequacy, self-doubts and a lack of confidence in her ability as a hockey player. These implications have had a detrimental effect on Jane's enjoyment of the game and her overall performance. Another key distinction between Jane and Sarah (low copers) and Megan, was how they perceived general stressors. Where Jane and Sarah would become *distressed*, Megan would experience *eustress*. Megan was constantly challenging herself to perform better and was driven by the challenge of playing competitive sport, and thrived on it. Lastly, Sarah and Megan differed in attitude, with Sarah being pessimistic and always saw everything as going wrong (e.g., *wanting to win, knowing we can, but nothing ever going right*). In contrast, Megan showed great determination and desire to be successful in the face of adversity and always appraised a situation as a challenge rather than a threat. She expressed a "*fuck-you, I'll show you"* type of attitude.

Coping Mental Skills Training Programme

The first two parts of this investigation served as a reflective discovery process in which the investigator explored the issues central to both coping in elite hockey and the coping needs of hockey players in New Zealand. Using the knowledge gained in the first two parts of the investigation, the Coping Mental Skills Training Programme (Coping MSTP) for use by hockey players and coaches was designed. Previous research has stressed the need to tailor cognitive mental skills training interventions to specific sports (Thomas & Fogarty 1997; Silva & Weinberg, 1984). In particular, the present study tailored the Coping MSTP to the sources of stress that players' experienced and were identified through both qualitative and quantitative analysis. It has been well established that elite athletes need to acquire a wide range of coping skills to effectively manage competitive stressors (e.g., Dugdale, Eklund & Gordon, 2002; Gould, Eklund & Jackson, 1993; Gould et al., 1999). In support of this finding is the wide array of sources of stress found in the present study. Specifically, the sources of stress identified involved a range of stressors including, (a) inability to focus; (b) worries about abilities/skills, not living up to potential/expectations, coping with pressure (cognitive content); (c) lack of self-belief; (d) lack of confidence; (e) performance issues (e.g., worry about throwing a bad pass); (f) lack of communication; (g) lack of preparation/readiness; (h) mental toughness; (i) organisational skills; (j) leadership issues; and (k) team dynamics. In addition, the present study also identified a number of demands placed on elite hockey players, such as expectations (player's own and coach(s)' expectations), mental toughness, coping with pressure, reading the game, skill competency, dealing with cognitive thoughts, commitment, personal issues and environmental issues. A significant number of such demands related to organisational stress. Previous research has shown that a number of non-competition stressors arise from social, organisational, political, occupational and cultural sources (Fletcher & Hanton, 2003; Noblet & Gifford, 2002; Woodman & Hardy, 2001), and the present study supported thses findings. This has important implications for developing stress management programmes or MSTP. It is important that both competitive and non-competitive demands, and sources of stress need to be taken into consideration.

Elite players, coaches and administrators identified the following as pertinent areas where players needed assistance: self-belief, confidence, coping with pressure, coping with poor performance, managing player expectations and communication. In particular, *self-belief* and *confidence* were predominantly identified as an area in which New Zealand hockey players needed assistance to believe in their ability and truly believe that they had the capability to succeed. For example, *"Belief in our ability to beat the opposition, especially at New Zealand level. We are not brought up in a country that tells us we are great hockey players, we don't think of ourselves as great hockey players. Whereas, other countries do, they always rate themselves and are arrogant that they can beat the opposition. We don't think like that."* (Sonya, Player).

Due to the exploratory nature of the first two parts of the study, the researcher was able to understand the broader issues of coping effectively within elite hockey to help assist the players to cope more effectively. As identified within the present study, coping effectiveness can be considered in terms of short-term outcomes (i.e., where the athlete is able to manage a specific stressor at the time it occurs), or long-term outcomes (i.e., general adaptation over time) (Nicholls et al., 2005). Recent studies have shown that effective coping is related to the choice of coping strategy in a particular context (Eubank, Collins & Smith; 2000; Gaudreau, Blondin & Lapierre, 2002; Pensgaard & Duda, 2003). They found coping strategies that facilitated performance were maintaining positive self-statements, positive focus, planning, active coping and optimising emotions. On the other hand, negative coping strategies involved negative self-talk statements, preoccupation with significant others, lack of concentration and uncertainty. These findings are consistent with the findings of the present study, as the high coper used active coping, planning and optimised emotions; whereas the low copers used negative self-talk statements and were preoccupied with others. In addition, the present findings supported the use of problem-focused coping strategies that deal with controllable aspects of stressor to enhance performance. Previous research suggests that problem-focused strategies may contribute best to long term management of stressful situations (Roth & Cohen, 1986).

Participants believed that academy level players need to be the focus for the Coping MSTP. The participants believed that the younger players need to come into the

New Zealand team, knowing what to expect. Previous research supports the use of assessing players at a much younger age (Rogerson & Hrycaiko, 2002). It may be easier for younger athletes to successfully develop mental skills before less effective routines are adopted. The findings of the present study revealed that new players (New Caps) to the team experienced a number of stressors related to a lack of readiness or preparation to play at international level. Therefore, academy players would benefit greatly from learning coping strategies to help them deal with a number of stressful experiences they will encounter at the elite level.

Based on the above findings, a Coping MSTP intervention was designed based on a workbook (refer to Appendix N). The central focus of the design was to enhance performance, increase coping effectiveness and assist players to deal with the types of stressors they predominantly experienced. The mental skills included within the Coping MSTP were mental toughness, coping with pressure, keeping your focus, positive self-talk, thought stopping, enhancing self-confidence, competition routines, mental preparation and the importance of communication. The focus of the intervention was to enhance the personality qualities (i.e., mental toughness, self-belief and self-confidence) that were identified through previous literature (Smith et al., 1995) and within the present study. In addition, the techniques identified to enhance such qualities were positive self-talk, cognitive restructuring techniques, thought stopping, mental preparation and competition routine (Barnes & Swain, 2002; Bouffard & Crocker, 1992; Bull, 1995; Hodge, 1994; Hodge & McKenzie, 2002; Jones et al., 2002; Madden, 1995; Orlick, 1986; Rogerson & Hrycaiko, 2002; Smith, 1986a; Summers et al., 2002; Walen, DiGiuseppe & Dryden, 1992). In addition, focusing techniques were also included as the inability to focus was identified within the quantitative findings as one of the most salient stressors. Because the participants within the intervention had no previous experience using mental skills, the intervention developed a broad range of mental skills training techniques to introduce them to the skills so that they could adapt their own strategies for their own use. Indeed, the high-coper within the present investigation believed that her strategies were effective because they suited her.

Evaluation of the Components of the Coping MSTP

Results of the present study found that, overall, the knowledge, importance and use of mental skills improved meaningfully across the four participants. Although participants had very little experience at using mental skills, pre-intervention profiling revealed that they still viewed it as an important aspect of hockey performance. Although all participants increased moderately over all mental skills during the duration of the intervention, Mary (Case 2) and Amanda (Case 3) were identified as experiencing the most meaningful increases in knowledge. Mary also showed meaningful changes in her perceptions of the importance of mental skills. In particular, Mary perceived confidence as the most important factor in helping her cope effectively. Such a finding is consistent with previous studies, which found that self-confidence can moderate the effect of physiological arousal and cognitive anxiety on performance (Hardy et al., 1996). The present findings supported the important facilitating athletes' self-confidence through MSTPs. The findings also revealed that the coping process is changeable and the ability to cope will change as the status of the person-environment changes (Hammermeister & Burton, 2001). Therefore, in this case what Mary thinks influences what she does (e.g., responses to stressors and strategies used). In addition, she also identified the importance of concentration skills and coping with pressure. The most learning for Mary occurred in competition planning, where her learning increased after the intervention. This finding was encouraging and implies that Mary effectively learned the basic concepts of competition planning, which she could apply what strategies worked for her, to successfully individualise her competition plans. In support of this finding, Mary also showed significant increases in the use of competition planning and continued to maintain a high utilisation of competition planning during the follow-up period. Competition planning is a useful skill in helping regulate optimal physical activation and optimal tension (Hodge, 1994). Therefore, through more consistent pre-game routines and an awareness of what works for her, Mary was able to perform more optimally. In addition, the most learning for Amanda occurred for competition planning and coping with pressure. The findings of the present study support the findings of

Mellalieu, et al (2003), where both positive and negative emotions can have both an optimal or detrimental influence on how athletes' perform. As in Mary's case, such findings highlight the need for individualising preparation (even in team sports) and ensuring athletes' develop a self-awareness of their arousal levels, so that they can identify their optimal level of arousal.

Self-awareness was an important finding within both part two and three of the study. Such findings suggest that applied sport psychologist should facilitate athletes to be aware of themselves and achieve perceptiveness within their performances. Although sport psychology emphasis is the basic mental skills, there is no reason why sport psychologist should encourage athletes to adapt such skills to suit their individual needs. Indeed, variability in coping outcomes may be a function of the situation, previous performance (success/failure), and individual variable.

The present study found that the participants were able to internalise and transfer the learning gained through the workbook effectively, and displayed an overall increase in the use of and knowledge mental techniques. Such a finding is reflective of the Coping MSTPs ability to be adapted for the sport environment. Although performance profiles for the use of mental skills does not directly imply that participants necessarily performed the techniques effectively. The additional performance profiling completed by the participant's coach, other player and significant other, confirmed the assumption by revealing that they observed meaningful and positive improvements in the participants' use of mental skills. Specifically, the mental skills that the participants reported using the most, included concentration skills, coping with pressure, competition planning, communication and self-talk and thought stopping. Areas with only modest improvements were those related to mental toughness and confidence. One individual variation, was that Mary showed significant improvements in confidence. However, in general, the areas where the most gains were made were discussed above. It is reasonable to expect that the participants' would vary in their knowledge, importance and use of the mental skills, depending on each participant's existing abilities and needs.

Through verbal feedback, the investigator identified certain areas where players needed assistance. These areas included work based on the principles of rational emotive therapy (RET), concentration styles, evaluation of attention abilities, exercise on reasons

to feel confident, game focus plans, coping plans and ‘what if’ scenarios. With the exception of the exercise on reasons to feel confident, all of these exercises in the workbook were technical and did require further assistance from the investigator to ensure that the participants correctly achieved the purpose of the exercises. Such findings reveal the need for careful guidance in various areas of MSTPs, especially on cognitive strategies. Recent research (Cerin, 2003; Meyers, Whelan, & Murphy, 1996) suggests that interventions aimed at changing individuals’ appraisal of stressful situations (e.g., cognitive restructuring) may be more effective in assisting athletes to improve their ability to cope in stressful situations. Therefore, considering the complexity of coping, the management of the intervention is important to ascertain that the techniques are used correctly to enhance athletes’ effectiveness to cope. Participants need one-on-one time with a sport psychologist to assist them develop their mental skills. As in this study feedback can be provided through brief contact, email and the over the telephone. The benefits of providing guidance and feedback were evident in the present study and were consistent with the current literature (Beckmann & Kellmann, 2003).

Although the participants found completing the worksheet exercises inconvenient (e.g., they didn’t feel like sitting down and writing them out), they actually believed that working through the practical examples was useful. In addition, they found the workbook useful for recording information. This was particularly so at the start of the intervention when they were not familiar with the skills and found they referred to it regularly.

Social validity is one way of evaluating whether behaviour change is of applied significance (Kazdin, 1982). Essentially, the investigator wanted to determine if the intervention was both worthwhile for the participants, and whether the changes in the knowledge and use of mental skills would make a difference to their ability to cope. Results from the completed social validity questionnaire found that, in general, the participants found the procedures acceptable, and that learning and practising mental skills was not a major disruption to their lives. The most enjoyable procedures were concentration skills, confidence, and self-talk and thought stopping. Coping with pressure and competition planning were the least enjoyable. All participants felt that the

intervention had been worthwhile and were moderately satisfied with their level of improvement in coping. Participants were most satisfied with their increased improvement in concentrations skills, confidence, self-talk and thought stopping. Individual mental skill rankings of how beneficial the participants found the skills at enhancing their performances, revealed that concentration skills, confidence and coping with pressure were identified as being the most beneficial. Overall, participants believed that their effectiveness to cope increased moderately as a result of participating in the intervention. The researcher found the results of the social validity extremely useful in evaluating the effectiveness of the intervention because participants had an opportunity to express in written form what was of most benefit to them. It was an opportunity to personally provide feedback. The evaluation of the effectiveness is essential in facilitating improvements in applied sport psychology. Indeed, as stated by Smith (1989; cited in Anderson, Miles, Mahoney & Robinson, 2002) applied sport psychology is now in the 'age of accountability'. Congruent to current research, the present study supports the use of a case study approach to evaluating the effectiveness of the MSTP; where changes in behaviour and performance are monitored, and evaluation of the effectiveness of the MSTP is conducted through the use of social validity and consultation feedback mechanisms.

Overall, the knowledge, importance and use of mental skills improved meaningfully across the four intervention participants. As a result the participants believed they were better prepared and more able to cope with stressful situations. The Coping MSTP used in the intervention was standardised across the participants and incorporated a variety of mental skills to account for the wide variety of stressors experienced in elite hockey. Although, using a number of mental skills and techniques within a MSTP (or mental skill packages) could result in what is referred to as a 'treatment' effect, where researchers are unable to isolate the actual skills that treated the problem. The findings of the present study provide support for the use of packages of mental skills. Indeed, it was identified that problems or stressors often are interrelated and therefore, need to be dealt with simultaneously. Such a finding creates a need for applied sport psychologist to have a good understanding of why packages of mental skills or MSTP may be more beneficial to athletes than single skill delivery.

Practical Recommendations

Based on the findings of the present investigations, several recommendations can be made to assist hockey players and coaches deal with competitive stressors. The small purposeful sample used for the qualitative parts of the investigation, limit the generalisations beyond similar elite athletes. The findings identified some key distinctions between the low and high copers. Such differences played a vital role in the development of the Coping MSTP and should be areas where other players could focus development of their own coping skills. In particular, it was reported that (a) players who were more confident and less anxious had better coping outcomes (b) players who coped more effectively reported using more problem-focused coping strategies and less avoidance-focused strategies when compared with low copers (c) when faced with adversity, players who coped more effectively focused coping strategies on the controllable elements of the stressor (d) players who reported a higher ability to cope with stressful situations used strategies to facilitate performance (e.g., planning optimising emotions) (e) players who had more awareness of the sources of stresses used active coping and planning.

Developing Effective Coping Strategies

The findings of the intervention provide valid recommendations to assist hockey players in developing effective coping strategies.

(a) It is beneficial for players to develop coping strategies at a young age (prior to 20 years).

(b) Players need to develop a wide range of coping strategies to deal with a variety of stressors, where coping strategies are often more effective when used in combination with other strategies.

(c) It is extremely beneficial to players to adapt coping strategies developed for their own needs.

(d) Coaches working with players need to be aware of athletes' levels of anxiety and confidence.

(e) Players are encouraged to use coping strategies in training as well as competitive hockey games to enhance the automaticity and effectiveness of their coping strategies.

(f) Preparation plays an important role in enhancing the effectiveness of coping and performance.

(g) It is beneficial for players to use problem-focused strategies. Emotion-focused and avoidance-focus strategies can be beneficial, particularly in combination with problem-focused strategies, but they are often limited in their effectiveness when used in isolation.

(h) It is also beneficial to ensure coping strategies focus on the controllable elements of the stressor, such as reinterpreting negative situations.

(i) Facilitate athletes' to understand and choose the most effective copings strategy that is work for them and are able to manage the stressors they encounter.

MSTP Recommendations

A notable finding in the present study was the influence of cognitive content on the low copers' abilities to cope. Cognitive content refers to the participants' thoughts (i.e., what are they telling themselves about a situation that makes them react this way?). For example, when Jane would make a simple mistake (e.g., throw a bad pass) she was unable to recover and regain her ability to perform. Jane struggled to let go of such mistakes and would convince herself that she was *useless, weaker than the other players* and would *freak herself out*. Negative self-statements also were detrimental to her confidence, which inhibited her ability to cope further. Such an example illustrates the need for MSTPs to address the underlying issues that cause performance problems and should not just focus on the mental skills for performance enhancement only. As identified within the present study, sources of stress are complex and often interrelated. Therefore, it is important to identify the source of the problem to prevent further adverse effects occurring. Cognitive restructuring techniques were found to be useful within the

present study. If one can change the way a player interprets a situation, it will also alter how he/she feels about it, and may often correspondingly change behaviour.

The present study identified a number of organisational stressors. It appears that both competitive and non-competitive demands, and sources of stress place athletes in a team environment under additional pressures. Therefore, MSTPs need to consider the wide range of stressors, including organisational stressors to assist athletes cope more effectively. Athletes need to be taught a wide range of strategies to help ensure that the have the appropriate resources to deal with a variety of stressors. In particular, the present study found that the most effective mental skills for enhancing performance and effective coping included techniques for coping with pressure, concentration skills and techniques for enhancing confidence. Competition planning also was found to be a very useful practical tool.

CHAPTER SIX

Summary

The present study set out as a reflective discovery process in which the researcher explored the issues central to both coping in elite hockey and the coping needs of female elite hockey players in New Zealand. Both qualitative and quantitative methods were used as a triangulation approach to provide a comprehensive understanding of the coping issues pertinent to elite female hockey players and build on previous findings. Using the knowledge gained in the first two parts of the study, the third part was designed to provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) for female hockey players and coaches. In particular, the present study aimed to answer the following questions:

A. Design

1. Identify:
   - What stressful situations and/or challenges are experienced by athletes during major hockey competitions.
   - How players react to stressful situations and challenges.
   - The types or combinations of coping strategies used by athletes.

2. Explore: Individual differences in the stability and variability of coping.
   - Investigate the differences in coping strategies used across various stressful situations.
   - Investigate performance of players who cope effectively in comparison with those who are ineffective at coping.

3. Examine: The relationship between coping strategy effectiveness, automaticity and performance.

B. Implementation

1. A coping Mental Skills Training Programme (Coping MSTP) was implemented. This intervention will be grounded in the findings from the first part of the study.

C. Evaluation

1. Investigate: The effectiveness of the Coping MSTP.
   - Evaluation of the components of the Coping MSTP.
   - Identify whether coping skills can be taught to enhance effective coping.

2. Identify: What recommendations and Mental Skills Training (MST) techniques can be offered to help develop coping strategies in female field hockey players.

In relation to research question one, the salient sources of stress for elite female hockey players involved a range of stressors including, (a) inability to focus; (b) worries about abilities/skills, not living up to potential/expectations, coping with pressure (cognitive content); (c) lack of self-belief; (d) lack of confidence; (e) performance issues (e.g., worry about throwing a bad pass); (f) lack of communication; (g) lack of preparation/readiness; (h) mental toughness; (i) organisational skills; (j) leadership issues; and (k) team dynamics. These findings are consistent with previous findings (Dale, 2000; Gould, Eklund & Jackson, 1993; Gould , Guinan, Greenleaf, Medberry & Peterson, 1999; Orlick & Partington, 1988). The present findings also support previous findings that elite athletes need to acquire a wide range of coping skills to effectively manage competitive stressors (e.g., Dugdale, Eklund, & Gordon, 2002; Gould, Eklund & Jackson, 1993; Gould et al., 1999). Coping effectiveness has been found to be related to the choice of coping strategy in a particular context (Eubank & Collins; 2000; Gaudreau, Blondin & Lapierre, 2002; Pensgaard & Duda, 2003). They found coping strategies that facilitated performance were maintaining positive self-statements, positive focus,

planning, active coping and optimising emotions. In contrast, negative coping strategies involved negative self-talk statements, preoccupation with significant others, lack of concentration and uncertainty. These findings are consistent with the findings of the present study where the high coper used active coping, planning and optimised emotions. The low copers were identified as using negative self-talk statements and were preoccupied with others. In addition, the present findings supported the use of problem-focused coping strategies that deal with controllable aspects of stressor to enhance performance. Previous research suggests that problem-focused strategies may contribute to long term management of stressful situations (Roth & Cohen, 1986).

Results found that, when confronted by stressful situations, participants predominantly reacted in one of four ways, felt challenged by the situation, were accepting of the situation, felt panicked, and/or felt the situation was managable. Primary and secondary appraisals are vital in understanding the stress process fully. The primary appraisal evaluates the situation and person-environmental demands placed on individual. The secondary appraisal follows and is where the individual judges his/her ability to deal with the stressor and the likely outcomes of the situation (Lazarus & Folkman, 1984). The present study showed that the high coper was able to reappraise stressful situations positively and focused on the factors she could control to resolve the stressor, whereas the low copers were unable to do so. A major barrier to appraising the situation positively was related to cognitive content, where the low copers continually thought negative self-statements. The findings from part three of the study suggest that participants are able to effectively change how they appraise situations through cognitive restructuring.

Findings from the present study support past research and suggest that problem-focused strategies may contribute to long term management of stressful situations (Roth & Cohen, 1986). In particular, problem-focused strategies that deal with controllable aspects of stressors enhanced coping effectiveness. The ability to focus/refocus was identified as a main predictor of coping effectiveness. In addition, having a good awareness of one’s own abilities to cope and awareness of your arousal levels enhanced participants’ coping. In addition, pre-grame preparation also contributed to participants’ ability to cope.

In relation to question two, as previously identified, Megan (high coper) utilised coping strategies to enhance her performance more than Jane and Sarah (low copers). Consequently, Megan reported that her coping strategies were more effective and impacted positively on her performance more so than Jane and Sarah. Although the low copers found the coping strategies they used were beneficial, they were somewhat limited in their effectiveness. Such a finding is not surprising due to the use of relatively short-term benefits of some of the strategies (i.e., avoidance-focused). The benefits of using strategies were often reported not for enhancing their performance, but for alleviating their mental state. Megan (high coper) more consistently reported positive outcomes and used strategies aimed at enhancing her performance. Such outcomes may have been due to Megan's consistent use of problem-focused coping strategies. The present findings support past research results that problem-focused coping strategies provide long-term benefits compared to emotion-focused or avoidance focused (Roth & Cohen, 1986).

In relation to the development of a Coping MSTP, previous research has stressed the need to tailor cognitive mental skills training interventions to specific sports (Thomas and Fogarty, 1997; Silva and Weinberg,1984). In particular, the present study specifically tailored the Coping MSTP to the sources of stress that players' experienced as identified through both qualitative and quantitative analysis. It has been well established that elite athletes need to acquire a wide range of coping skills to effectively manage competitive stressors (e.g., Dugdale, Eklund & Gordon, 2002; Gould, Eklund & Jackson, 1993; Gould et al., 1999). In support of this finding is the wide array of sources of stress found in the present study. A significant number of recent studies have shown that effective coping is related to the choice of coping strategy in a particular context (Eubank & Collins; 2000; Gaudreau, Blondin & Lapierre, 2002; Pensgaard & Duda, 2003). Specifically, they found coping strategies that facilitated performance were maintaining positive self-statements, positive focus, planning, active coping, optimising emotions. In contrast, negative coping strategies involved negative self-talk statements, preoccupations with significant others, lack of concentration and uncertainty. These findings are consistent, with the findings of the present study, where the high coper used active coping, planning, and optimized emotions, whereas the low copers were identified

to use negative self-talk statements, be preoccupied with others. In addition, the present findings supported the use of problem-focused coping strategies that deal with controllable aspects of stressor to enhance performance. Indeed, previous research suggests that problem-focused strategies may contribute to long term management of stressful situations (Roth & Cohen, 1986).

Results of the present study found that overall, the knowledge, importance and use of mental skills improved significantly across the four participants. Specifically, the mental skills that the participants reported using the most, included concentration skills, coping with pressure, competition planning, communication and self-talk and thought stopping. Generally the participants found the procedures acceptable and that learning and practicing mental skills was not a major disruption to their lives. All participants felt that participating in the intervention had been worthwhile and were moderately satisfied with their level of improvement in coping. Participants were most satisfied with their increased improvement in concentrations skills, confidence, self-talk and thought stopping. Individual mental skill rankings of how beneficial participants were to their performance revealed that concentration skills, confidence and coping with pressure were identified as being the most beneficial to participants performance. Overall participants felt that their effectiveness to cope increased moderately as a result of participating in the intervention.

In reference to practical recommendations, the findings of the present study identified some key distinctions between the low and high copers. Such differences played a vital role in the development of the Coping MSTP and should be areas where other players should focus to develop their own coping skills. In particular, it was reported that (a) players who were more confident and less anxious had better coping outcomes (b) players who coped more effectively reported using more problem-focused coping strategies and less avoidance-focused strategies compared to low copers (c) when faced with adversity players who coped more effectively focused coping strategies on the controllable elements of the stressor (d) players who reported a higher ability to cope with stressful situations used strategies to facilitate performance e.g., planning optimising emotions (e) players who had more awareness of the sources of stresses used active coping and planning.

The findings of the intervention provide valid recommendations to assist hockey players in developing effective coping strategies.

(a) It is beneficial for players to develop coping strategies at a young age (prior to 20 years)
(b) Players need to develop a wide range of coping strategies to deal with a variety of stressors, where coping strategies are often more effective when used in combination with other strategies
(c) It is extremely beneficial to players to adapt coping strategies developed for their own needs
(d) Coaches working with players need to be aware of athletes' levels of anxiety and confidence
(e) Players are encouraged to use coping strategies in training as well as competitive hockey games to enhance the automaticity and effectiveness of their coping strategies.
(f) Preparation plays an important role in enhancing the effectiveness of coping and performance.
(g) It beneficial for players to use problem-focused strategies. Although emotion-focused and avoidance-focus strategies can be beneficial, particularly in combination with problem-focused strategies. They are often limited in their effectiveness when used in isolation.
(h) It is also beneficial to ensure coping strategies focus on the controllable elements of the stressor, such as reinterpreting negative situations.
(i) Facilitate athletes' to understand and choose the most effective copings strategy that is work for them and are able to manage the stressors they encounter.

The findings of the present study identify the need to address the underlying issues that cause performance problems and should not just focus on the mental skills for performance enhancement only. As identified within the present study sources of stress are complex and often interrelated, therefore, it is important to identify the source of the problem to prevent further adverse effects occurring. Cognitive restructuring techniques

were found to be useful within the present investigation. Indeed, if you can change the way a player interprets a situation, it will also alter how they feel about it, and may often correspondingly change their behaviour.

MSTP need to consider the wide range of stressors, including organisational stressor to assist athletes cope more effectively. Indeed, athletes need to be taught a wide range off stressor to help ensure that athletes have the appropriate resources to deal with a variety of stressors. In particular, the present found that the most effective mental skills for enhancing performance and effective coping included techniques for coping with pressure, concentration skills, and techniques for enhancing confidence. Competition planning was also found to be a very useful practical tool.

Conclusion

The present study identified a wide range of stressors experienced by elite female hockey players. Such a finding clearly demonstrates the need for participants to also possess a wide variety of coping strategies and resources to adequately deal with the range of stressors experienced. . The present findings supported the use of problem-focused coping strategies that deal with controllable aspects of stressor to enhance performance. In addition, players who reported a higher ability to cope with stressful situations used strategies to facilitate performance e.g., planning optimizing emotions and players who had more awareness of the sources of stresses used active coping and planning. Results of intervention revealed that overall, the knowledge of, importance of and use of mental skills improved significantly across the four participants. Specifically, the mental skills that the participants reported using the most, included concentration skills, coping with pressure, competition planning, communication and self-talk and thought stopping. In general, the participants found the procedures acceptable and that learning and practicing mental skills was not a major disruption to their lives. All participants felt that participating in the intervention had been worthwhile and were moderately satisfied with their level of improvement in coping. Individual mental skill rankings of how beneficial participants were to their performance revealed that concentration skills, confidence and coping with pressure were identified as being the

most beneficial to participants performance. Overall participants felt that their effectiveness to cope increased moderately as a result of participating in the intervention.

Future Recommendations

Future recommendations provided within this section are limited to areas relating to the present investigation. Specifically, research looking at coping within team sports is relatively limited, and is only beginning to develop in sport psychology research. In particular, research is needed in several areas.

Gould, Eklund & Jackson (1993) suggested that practicing coping strategies would enable athletes to respond automatically in a stressful situation. However, the present results did not suggest that applying coping strategies automatically were related to practicing or reported to be beneficial to coping outcomes. Such difference could be related to the type of coping strategy used or individual differences of athletes. For example, Jane responded automatically to certain stressors by joking. Although such a response is automatic, this could be a nervous reaction to relieve tension caused by the stressor. Further research is needed to establish the relationship between automaticity of coping strategies and coping effectiveness. In addition, reliable and valid methods for measuring automaticity need to be developed.

Longitudinal intervention studies are needed to investigate further and overcome retrospective interview designs. A limitation of the present study was that it was cross-sectional study (brief intervention). Longitudinal studies on coping strategies and coping skill training interventions across time would provide useful information on the acquisition of coping skills and the consistency of coping effectiveness across time.

Organisational stress was identified as a prominent source of stress for elite hockey players. Obviously due to the lack of research within sports in organisational stress this would be a worthwhile area for future research. In addition, the research in organisation stress has utilised qualitative methodologies maybe a psychometric instrument could be developed. Further research should also look at the types of

strategies used to cope with organisational stress and more research is needed to examine the effective strategies for dealing with organisational stress.

The present study identified sport specific stressors individual to hockey. Specifically, stressors were found that related to skill competency and reading the game, due to the complex and diverse range of skills required to play the sport. Until recently (Holt and Hogg, 2002; Park, 2000; Noblet and Gifford, 2002), previous research on stress and coping in sport has primarily focused on athletes within individual sports (Gould, Finch & Jackson, 1993; Scanlan, Ravizza & Stein, 1989; Scanlan, Stein & Ravizza, 1991). Due to the complexity of coping, future research is needed to further extend the literature on team sports. As noted by Weiss (1998) applied sports psychologist are now being to work more with non-professional/elite athletes, therefore, further research should also attempt to explore coping in athletes of varying skill levels. In addition, research in the future could examine if there are experience difference in the types of organisational stressors professional and non-professional athletes' experience.

The intervention for the present study used a standard workbook of relevant mental skills across participants. However, as the present study has shown that athletes' individual personality characteristic influence the effectiveness of coping it may be useful to look at designing an intervention using individualised mental skills for each participant. In addition, the participants in the intervention were encouraged to use the mental skills/techniques in both training and practice. Results of the present study found that participants' believed that practising and using the mental skills while playing enhanced the effectiveness of such skills. Therefore, future research needs to explore developing more practical mental skills training techniques that can be taught in the field.

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Appendix A

Letter Seeking Support for the Study

[Date]
[Name]
[Title]
[Address]

Dear _____

I am a Masters student from the Department of Human Movement and Exercise Science, The University of Western Australia, working under the supervision of Dr Sandy Gordon and Assoc. Prof. Robert Eklund. We would like to invite you to participate in a pilot study of coping in hockey. The primary purpose of this study is to explore the issues central to both coping in elite hockey and the coping needs of female hockey players in New Zealand. The second purpose is to provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) package to hockey players and coaches. Specifically, we are interested in interviewing you personally and receiving feedback on the coping needs of hockey players and the types of stressors experienced in hockey. In addition, this interview will allow you, as a representative of New Zealand hockey, an opportunity to express any areas of concern about the study and to suggest modifications.

There is a lack of research on coping in the context of hockey. To help enhance the coping skills of elite hockey players, it is important to explore the coping issues. It is hoped that the information collated from this study will provide a comprehensive overview of the issues that are pertinent to coping in elite hockey and provide a description of effective coping strategies for dealing with competitive stress. Further recommendations and a coping MSTP will be produced to cater for the needs of female hockey players in New Zealand.

I would be extremely grateful if you could read the enclosed proposal and indicate via a letter whether the Hockey New Zealand is willing to support this research study. Please read the proposal carefully before deciding whether to accept the invitation to participate. If you are interested in participating, or have any questions, please do not hesitate to contact the researchers.

Thank you for taking the time to consider participating in this study.

Yours sincerely

Jaynie Gardyne, BPhEdH	Sandy Gordon, PhD	Robert C. Eklund, PhD
Principal Researcher	Researcher	Co-Researcher

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Appendix C
Letter (Part One)

[Date]
[Name]
[Title]
[Address]

Dear _____

I am a Masters student from the Department of Human Movement and Exercise Science, The University of Western Australia, working under the supervision of Dr Sandy Gordon and Assoc. Prof. Robert Eklund. We would like to invite you to participate in a pilot study of coping in hockey. The primary purpose of this study is to explore the issues central to both coping in elite hockey and the coping needs of female hockey players in New Zealand. The second purpose is to provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) package to hockey players and coaches. Specifically, we are interested in interviewing you personally and receiving feedback on the coping needs of hockey players and the types of stressors experienced in hockey. In addition, this interview will allow you, as a representative of New Zealand hockey, an opportunity to express any areas of concern about the study and to suggest modifications.

There is a lack of research on coping in the context of hockey. To help enhance the coping skills of elite hockey players, it is important to explore the coping issues. It is hoped that the information collated from this study will provide a comprehensive overview of the issues that are pertinent to coping in elite hockey and provide a description of effective coping strategies for dealing with competitive stress. Further recommendations and a coping MSTP will be produced to cater for the needs of female hockey players in New Zealand.

Before we commence our interviews we will need to obtain your consent. A copy of the consent form and information sheet is enclosed. After gaining your approval, we will require approximately one hour of your time for structured discussion. A summary report of the completed study will be sent to you on request.

Enclosed is a copy of the information sheet informing you of the details of the study. Please read it carefully before deciding whether to accept the invitation to participate. If you are interested in participating, or have any questions, please do not hesitate to contact the researchers.

Thank you for taking the time to consider participating in this study.

Yours sincerely

Jaynie Gardyne, BPhEdH	Sandy Gordon, PhD	Robert C. Eklund, PhD
Principal Researcher	Researcher	Co-Researcher

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Appendix D
Information Sheet (Interview)

Research Study Information Sheet

Participant

Female athletes involved in elite hockey are currently being invited to participate in a study being conducted by the Department of Human Movement and Exercise Science, The University of Western Australia. Please read this information sheet carefully before deciding whether to participate. If you decide to participate, we thank you. If you decide not to take part there will be no disadvantage to you, and we thank you for considering our request.

What is the aim of the study?

- To extend the literature on coping in the elite hockey setting
- To explore the issues central to both coping in elite hockey and the coping needs of female elite hockey players in New Zealand.
- To provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) to female hockey players and coaches.

Why is the study important?

There is a lack of research on coping in the context of hockey. To help enhance the coping skills of elite female hockey players, it is important to explore the coping issues relating to elite hockey. It is hoped that the information collected from this study will provide a comprehensive overview of the issues that are pertinent to coping in elite hockey, and provide a description of effective coping strategies for dealing with competition stress. Further recommendations and a Coping MSTP will be produced to cater for the needs of female hockey players in New Zealand.

What will participants be asked to do?

If you choose to participate in this study you will initially be asked to volunteer your time to be involved in either a pilot discussion interview or a brainstorming session.

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Can participants change their mind and withdraw from the study?

You may withdraw at any stage without prejudice or disadvantage.

How will the information be used?

Personal information obtained from the questionnaire or interview will remain strictly anonymous, and your confidentiality will be preserved at all times.

- Only the three researchers involved in the study will have direct access to personal information.
- No information that could identify participants will be disclosed or published.
- Each participant will be assigned a unique code number and will be identified only by this number.

A plain language summary of the study will be available to all participants on request.

If you are interested in participating, or have any questions concerning this study, please do not hesitate to contact:

Jaynie Gardyne	Ph (03) 218 2599 Ext 858
Dr Sandy Gordon	Ph 0061 8 9380 2375
Dr Bob Eklund	Ph 0061 8 9380 3887

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Appendix E
Pilot Interview Schedule

Section I. Introduction

1. Please describe the demands that elite hockey places on players.
   (looking for physical, mental, technical, tactical demands of the sport)

2. How have the demands on players changed in the last few seasons and what influence has that had on hockey as a whole?

3. What are the characteristics of 'Mental Toughness' in hockey?

Section II. Stressful experiences and coping strategies

4. From your observations and experience, what are the major stressors that female hockey players have to contend with in elite hockey?

5. In your opinion, how do players usually react to the stressors you have identified?

   (looking to identify any problems or areas in particular where players need assistance)

6. What is your knowledge of strategies used to help players cope with stressful experiences?

   Please tell me about the coping strategies typically used by coaches and/or players.

7. Personally, what would you like to learn about coping?

Section III. Conclusion

8. What are the main issues that you would like this study to address?

9. What sort of information would you like to see included in an information booklet for coaches and athletes?

10. How would you like the information gained from this study presented for coaches and athletes (e.g., workshops, lectures, booklets, and so on)?

11. Lastly, are there any suggestions or advice that you could offer that may be of assistance to the study?

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Appendix F

RESEARCH STUDY CONSENT FORM

'Design, Implementation and Evaluation of Coping Strategies among New Zealand Female Hockey Players'

Participant

I, …….. (*please print full name)* have read the information sheet regarding the above study and I understand what is required of me. I have had the opportunity to discuss the study and to ask questions, which have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I am aware that:

1. My participation in the study is entirely voluntary.
2. I have the right to withdraw from the study at any time without any disadvantage.
3. I understand that all information is treated as strictly confidential and access will be strictly limited to the principal researcher, unless required to disclose it by law.
4. The results of this study may be published, but my anonymity will be preserved.

I agree to take part in this study.

(Signature of Participant) (Date)

If you would like to obtain a copy of the results *please tick the box.* o

The Committee for Human Rights at the University of Western Australia requires that all participants are informed that, if they have any complaint regarding the manner in which a research project is conducted, it may be expressed to the Principal Researcher or, alternatively to the Secretary, Committee for Human Rights, Registrar's Office, The University of Western Australia, Crawley, Western Australia 6009, Australia (Phone 0061 8 9380 3703). All study participants will be provided with a copy of the Information sheet for their personal records.

Appendix G

Demographic Questions

ID # _____

Name: _____ (please print clearly)

Contact Address:
_____

_____ **Phone:** _____

Fax: _____ **Email:** _____

Team: _____ (please print clearly)

Age: _____ yrs

Playing Position: _____ (please print clearly)

Years of Competitive Hockey Experience: _____ yrs

Years of NPC Experience: _____ yrs

Achievements: (Please list notable hockey achievements)

Assessment of Stressful Experiences

1. Please describe any **stressful experiences** you have had **prior to or during** competitive hockey games.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. Did such stressful experiences affect your performance **during** your competitive hockey game?

Yes o No o

If yes, please describe how your performance was affected (please indicate what (in brackets) stressful situation you are discussing in your response).

_____
_____
_____
_____
_____
_____
_____
_____

3. When do such stressful experiences usually occur? Please be specific (e.g., 24 hours before the hockey game, or 5 minutes into the third quarter).

_____

4. Are stressful experiences something that is usually ‘expected’ or unexpected’? (i.e., are they something you and/or your team plan or prepare for?).

Expected o Unexpected o

5. Please describe briefly what you and/or your team have done in the past to prepare or plan for expected stressful experiences?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

6. In general, how do you feel when confronted with stressful experiences (e.g., panicked, threatened, challenged, accepting, something you could manage etc.)?

_____
_____
_____
_____
_____
_____

7. In general, how do you deal with stressful experiences? Do you use any strategies during competitive hockey games to help maintain your performance? Please describe or list these strategies.

_____
_____
_____
_____
_____
_____
_____
_____
_____

Assessment of Coping Effectiveness

8. In general, how effective are the strategies you identified in helping you cope? Please circle the appropriate number from the scale below to represent the degree to which you effectively coped with the stress and anxiety you encountered.

0% Effective										100% Effective
0	10	20	30	40	50	60	70	80	90	100

9. How easy was it for you to maintain your concentration or refocus during your competitive hockey games? Please circle the appropriate response from the scale below to represent the degree to which you feel refocusing was easy.

Refocusing was hard 1 2 3 4 5 6 7 8 9 Refocusing was easy

Assessment of Automaticity

10. In general, during stressful experiences

My coping required effort	1	2	3	4	5	6	7	8	9	My coping was automatic
I thought a great deal about my coping strategies	1	2	3	4	5	6	7	8	9	I didn't have to think about my coping strategies
I made a deliberate effort to cope	1	2	3	4	5	6	7	8	9	I made no conscious effort to cope

The Sport Anxiety Scale (SAS)

A number of statements that athletes have used to describe their thoughts and feelings before or during competition are listed below. Read each statement and then **circle** the appropriate number that best reflects how you usually feel prior to or during hockey competitions. Some athletes feel they should not admit to feelings of nervousness or worry, but such reactions are actually quite common, even among elite athletes. To help us better understand reactions to competition, we ask you to share your true reactions with us. There are, therefore, no right or wrong answers. Do not spend too much time on any one statement, but choose the answer that describes how you commonly react.

		Not at all	Somewhat	Moderately so	Very much so
1.	I feel nervous	1	2	3	4
2.	During competition, I find myself thinking about unrelated things	1	2	3	4
3.	I have self-doubts	1	2	3	4
4.	My body feels tense	1	2	3	4
5.	I am concerned that I may not do as well in competition as I could	1	2	3	4
6.	My mind wanders during sport competition	1	2	3	4
7.	While performing, I often do not pay attention to what's going on	1	2	3	4
8.	I feel tense in my stomach	1	2	3	4
9.	Thoughts of doing poorly interfere with my concentration during competition	1	2	3	4
10.	I am concerned about choking under pressure	1	2	3	4
11.	My heart races	1	2	3	4
12.	I feel my stomach sinking	1	2	3	4
13.	I'm concerned about performing poorly	1	2	3	4
14.	I have lapses in concentration during competition because of nervousness	1	2	3	4
15.	I sometimes find myself trembling before or during a competitive event	1	2	3	4
16.	I'm worried about reaching my goal	1	2	3	4
17.	My body feels tight	1	2	3	4
18.	I'm concerned that others will be disappointed with my performance	1	2	3	4
19.	My stomach gets upset before or during competition	1	2	3	4
20.	I'm concerned I won't be able to concentration	1	2	3	4
21.	My heart pounds before competition	1	2	3	4

Coping

We would like to know how you generally cope with stressful situations. Please read the statements listed below and indicate how much you use each of the following coping strategies, by **circling** the appropriate response.

	Not at all used		Moderately used		Very much used
1. I try to grow as a person as a result of the experience.	1	2	3	4	5
2. I turn to work or other substitute activities to take my mind off things.	1	2	3	4	5
3. I get upset and let my emotions out.	1	2	3	4	5
4. I try to get advice from someone about what to do.	1	2	3	4	5
5. I concentrate my efforts on doing something about it.	1	2	3	4	5
6. I say to myself “this isn’t real”.	1	2	3	4	5
7. I laugh about the situation.	1	2	3	4	5
8. I admit to myself that I can’t deal with it and quit trying.	1	2	3	4	5
9. I restrain myself from doing anything too quickly.	1	2	3	4	5
10. I discuss my feelings with someone.	1	2	3	4	5
11. I get used to the idea that it happened.	1	2	3	4	5
12. I talk to someone to find out more about the situation.	1	2	3	4	5
13. I keep myself from getting distracted by other thoughts or activities.	1	2	3	4	5
14. I daydream about things other than this.	1	2	3	4	5
15. I get upset, and am really aware of it.	1	2	3	4	5
16. I make a plan of action.	1	2	3	4	5
17. I make jokes about it.	1	2	3	4	5
18. I accept that this has happened and that it can’t be changed.	1	2	3	4	5

19. I hold off doing anything about it until the situation permits.	1	2	3	4	5
20. I try to get emotional support from friends or relatives.	1	2	3	4	5
21. I just give up trying to reach my goal.	1	2	3	4	5
22. I take additional action to try to get rid of the problem.	1	2	3	4	5
23. I refuse to believe that it has happened.	1	2	3	4	5
24. I let my feelings out.	1	2	3	4	5
25. I try to see it in a different light, to make it seem more positive.	1	2	3	4	5
26. I talk to someone who could do something concrete about the problem.	1	2	3	4	5
27. I sleep more than usual.	1	2	3	4	5
28. I try to come up with a strategy about what to do.	1	2	3	4	5
29. I focus on dealing with this problem, and let other things slide a little.	1	2	3	4	5
30. I get sympathy and understanding from someone.	1	2	3	4	5
31. I kid around about it.	1	2	3	4	5
32. I give up the attempt to get what I want.	1	2	3	4	5
33. I look for something good in what is happening.	1	2	3	4	5
34. I think about how I might best handle the situation.	1	2	3	4	5
35. I pretend that it hasn’t really happened.	1	2	3	4	5
36. I make sure not to make matters worse by acting too soon.	1	2	3	4	5
37. I try hard to prevent other things from interfering with my efforts at dealing with this.	1	2	3	4	5
38. I go to movies or watch TV to think about it less.	1	2	3	4	5

39. I accept the reality of the fact that it happened.	1	2	3	4	5
40. I ask people who have had similar experiences what they did.	1	2	3	4	5
41. I feel a lot of emotional distress and I find myself expressing those feelings a lot.	1	2	3	4	5
42. I take direct action to get around the problem.	1	2	3	4	5
43. I force myself to wait for the right time to do something.	1	2	3	4	5
44. I make fun of the situation.	1	2	3	4	5
45. I reduce the amount of effort I'm putting into solving the problem.	1	2	3	4	5
46. I talk to someone about how I feel.	1	2	3	4	5
47. I learn to live with it.	1	2	3	4	5
48. I put aside other activities in order to concentrate.	1	2	3	4	5
49. I think hard about what steps to take.	1	2	3	4	5
50. I act as though it hasn't even happened.	1	2	3	4	5
51. I do what has to be done, one step at a time.	1	2	3	4	5
52. I learn something from the experience.	1	2	3	4	5

Sources of Stress

Please read the following statements and then **circle** the appropriate response that indicates how you usually felt during past **competitive hockey games**. Some athletes feel they should not admit to feelings of nervousness or worry, but such reactions are quite common, even among elite athletes. To help us learn more about the major sources or causes of stress you encounter during games, we ask you to share your **true reactions** with us.

During competitive hockey games:	Never	Rarely	Sometimes	Often	Always
1. I worried about my lack of experience.	1	2	3	4	5
2. I worried about the level of competition.	1	2	3	4	5
3. I worried about bad calls by umpires.	1	2	3	4	5
4. I worried about what my coach(es) would think or say.	1	2	3	4	5
5. I worried about the condition of the court surface.	1	2	3	4	5
6. I worried about the clothing I was wearing.	1	2	3	4	5
7. I worried about team management.	1	2	3	4	5
8. I worried about my lack of sponsorship.	1	2	3	4	5
9. I worried about my hockey career.	1	2	3	4	5
10. I worried about getting hurt or injured.	1	2	3	4	5
11. I worried about the large crowd.	1	2	3	4	5
12. I worried about the importance of the game.	1	2	3	4	5
13. I worried about what my teammates would think or say.	1	2	3	4	5
14. I worried about my financial situation.	1	2	3	4	5
15. I worried about the shoes I was wearing.	1	2	3	4	5
16. I worried about work or study hassles.	1	2	3	4	5
17. I worried about throwing a bad pass, missing the ball or missing a goal.	1	2	3	4	5
18. I worried about what my parents would think or say.	1	2	3	4	5

19. I worried about my future.	1	2	3	4	5
20. I worried about interpersonal problems within the team.	1	2	3	4	5
21. I worried about the competition venue.	1	2	3	4	5
22. I worried about what the media would think.	1	2	3	4	5
23. I worried about the scheduling of games.	1	2	3	4	5
24. I worried about my teammates making mistakes.	1	2	3	4	5
25. I worried about the television cameras.	1	2	3	4	5
26. I worried about family or relationship.	1	2	3	4	5
27. I worried about being dropped from the or starting line-up.	1	2	3	4	5
28. I worried about my abilities.	1	2	3	4	5
29. I worried about how good the opposition were.	1	2	3	4	5

I worried that other people would perceive me as appearing:

30. To not live up to my expectations	1	2	3	4	5
31. Untalented	1	2	3	4	5
32. Unable to handle the pressure	1	2	3	4	5
33. Fatigued	1	2	3	4	5
34. Unattractive	1	2	3	4	5
35. Not physically and mentally ready	1	2	3	4	5
36. Athletically incompetent	1	2	3	4	5
37. Under-skilled	1	2	3	4	5
38. To lose composure	1	2	3	4	5
39. Distressed	1	2	3	4	5
40. To not perform up to my potential	1	2	3	4	5
41. To not perform technical skills correctly.	1	2	3	4	5

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Appendix H
Letter (Part Two)

[Date]
[Name]
[Title]
[Address]

Dear _____

I am a Masters student from the Department of Human Movement and Exercise Science, The University of Western Australia, working under the supervision of Dr Sandy Gordon and Assoc. Prof. Robert Eklund. We would like to invite your team to participate in a study of coping in elite female hockey. Specifically, we would like your permission and support to administer a questionnaire to your team during the National Women's Hockey Tournament in Whangarei, from the 24th to 29th of September. The primary purpose of this study is to explore the issues central to both coping in elite hockey and the coping needs of female hockey players in New Zealand. The second purpose of the study is to provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) package to female hockey players and coaches.

There is a lack of research on coping in the context of hockey. To help enhance the coping skills of elite female hockey players, it is important to explore the coping issues currently concerning competitive hockey. It is hoped that the information collated from this study will provide a comprehensive overview of the issues that are pertinent to coping in elite hockey and provide a description of effective coping strategies for dealing with competitive stress. Further recommendations and a Coping MSTP will be produced to cater for the needs of female hockey players in New Zealand.

We will obtain the players' consent before administering the questionnaires. A copy of the participant consent and information sheet is enclosed for your records. After gaining this approval, approximately 40 minutes of the team's time will be needed to administer the questionnaire. A summary report of the completed study will be distributed to the association and the participants on request.

Enclosed is a copy of the information sheet informing you of the details of the study. Please read it carefully before deciding whether to accept the invitation to participate. If you are interested in participating, or have any questions, please do not hesitate to contact the researchers.

Thank you for taking the time to consider participating in this study.

Yours sincerely

Jaynie Gardyne, BPhEdH	Sandy Gordon, PhD	Robert C. Eklund, PhD
Principal Researcher	Researcher	Co-Researcher

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Appendix I

Research Study Information Sheet

Participant

Female athletes involved in elite hockey are currently being recruited to participate in a study being conducted by the Department of Human Movement and Exercise Science, The University of Western Australia. Please read this information sheet carefully before deciding whether to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you, and we thank you for considering our request.

What is the aim of the study?

- To extend the literature on coping in the elite hockey setting
- To explore the issues central to both coping in elite hockey and the coping needs of female elite hockey players in New Zealand.
- To provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) to female hockey players and coaches.

Why is the study important?

There is a lack of research on coping in the context of hockey. In order to help enhance the coping skills of elite hockey players it is important to first explore the coping issues concerning competitive hockey. It is hoped that the information collected from the study will provide a comprehensive overview of the issues that are pertinent to coping in elite hockey and provide a description of effective coping strategies for dealing with competition stress. Further recommendations and a Coping MSTP will be produced to cater for the needs of female hockey players in New Zealand.

What will participants be asked to do?

If you choose to participate in this study you will initially be asked to volunteer your time to complete a questionnaire regarding the above topic. A small number of participants may also be asked to participate in an in-depth personal interview, where you will be asked open-ended questions on the above topic.

Can participants change their mind and withdraw from the study?

You may withdraw from the study at any stage without prejudice or disadvantage.

How will the information be used?

Personal information obtained from the questionnaire will remain strictly anonymous, and your confidentiality will be preserved at all times.

- Only the three researchers involved in the study will have direct access to personal information.
- No information that could identify participants will be disclosed or published.
- Each participant will be assigned a unique code number and individuals will be identified only by this number.

A plain language summary of the project will be available to all participants upon request.

If you are interested in participating or have any questions concerning this study, please do not hesitate to call:

Jaynie Gardyne Ph (03) 218 2599 Ext 858
Dr Sandy Gordon Ph 0061 8 9380 2375
Dr Bob Eklund Ph 0061 8 9380 3887

Appendix J
Interview Schedule (High and Low Copers)

Section I. Introduction

1. Could you briefly describe your career in competitive hockey, including when you first began participating in hockey?

   (looking for demographics, beginning of hockey involvement, influence of involvement)

2. What are you striving for in your hockey career? Do you have defined goals? If so, what are they?

   How serious or committed are you about achieving these goals?

   (looking at the participants' approach to hockey and their perceived capabilities)

Section II. Coping experience

3. Can you please describe your knowledge of and/or experience with using coping strategies?

4. Can you please identify the demands and stressful experiences that you are subjected to in competitive hockey?

   Would you define these stressors as expected?

5. What, if any, plans or preparation have you developed to deal with these expected stressors?

Section III. Coping responses

6. How do you initially cope with a stressful experience? What is you first reaction to the situation?

   Why or why not do you perceive this reaction to be beneficial to helping you cope with the situation?

   At this point, what do you do next? (Include specific behaviours or actions taken)

7. Can you please describe the types of coping strategies that you typically use to cope with stressful experiences. (Make sure to explain what is involved in each strategy and, specifically, what stressful experiences you are trying to cope with.)

   (looking at the level of understanding about coping strategies and the effectiveness of the strategies for the situation)

8. Do you have to consciously think about the situation, and the strategies you use, or are your responses automatic?

   (looking at the issue of automaticity)

9. Describe the effectiveness or ineffectiveness of the strategies you have talked about.

10. What formal procedure do you have in place to help you cope effectively?

    (looking at what coping structures and routines are in place, and whether players practise such procedures)

11. Do you use times in training to practise your coping skills in a sport specific setting?

Section III. Personal characteristics

12. What factors help you to either cope or not cope with stressful experiences (outlining a practical example of a situation where you coped or did not cope)?

13. What circumstances have contributed to the effectiveness of your ability to cope or not cope?

    (looking at the influence of others or other variables on players)

Section IV. Support

14. In your opinion, does your coach provide opportunities in practices to help players improve their coping skills (e.g., various exercises or simulated game situations)? Elaborate on what opportunities they provide or what you feel they fail to provide.

15. Can you please identify the support people that you can turn to for help and what they can do for you?

Section V. Conclusion

1. In respect to coping, what do you presently perceive your needs or personal requirements to be?

2. What do you feel would be valuable for others to learn to help them cope with the demands of elite level hockey?

   Is there anything else you would like to mention at this time?

   Thank you for participating.

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Appendix K
Information Sheet (Interview)

Research Project Information Sheet

Participant

Female athletes involved in elite hockey are currently being invited to participate in a study being conducted by the Department of Human Movement and Exercise Science, The University of Western Australia. Please read this information sheet carefully before deciding whether to participate. If you decide to participate, we thank you. If you decide not to take part there will be no disadvantage to you, and we thank you for considering our request.

What is the aim of the study?

- To extend the literature on coping in elite hockey.
- To explore the issues central to both coping elite hockey and the coping needs of female hockey players in New Zealand.
- To provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) to female hockey players and coaches.

Why is the study important?

There is a lack of research on coping in the context of hockey. To help enhance the coping skills of elite female hockey players it is important to first explore the coping issues concerning elite hockey. It is hoped that the information collected from the study will provide a comprehensive overview of the issues that are pertinent to coping in elite hockey, and provide a description of effective coping strategies for dealing with competition stress in hockey. Further recommendations and a Coping MSTP will be produced to cater for the needs of female hockey players in New Zealand.

What will participants be asked to do?

If you choose to participate in this study you will initially be asked to volunteer your time to participate in an in-depth personal interview, where you will be asked open-ended questions on the above topic.

Can participants change their mind and withdraw from the study?

You may withdraw at any stage without prejudice or disadvantage.

How will the information be used?

Personal information obtained from the interview will remain strictly anonymous and your confidentiality will be preserved at all times.

- Only the three researchers involved in the study will have direct access to personal information.
- No information that could identify participants will be disclosed or published.
- Each participant will be assigned a unique code number and individuals will be identified only by this number.

A plain language summary of the project will be available to all participants on request.

If you are interested in participating, or have any questions concerning this study, please do not hesitate to call:

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Dr Sandy Gordon Ph 0061 8 9380 2375
Dr Bob Eklund Ph 0061 8 9380 3887

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Appendix L
Letter (Part Three)

[Date]
[Name]
[Title]
[Address]

Dear _____

I am a Masters student from the Department of Human Movement and Exercise Science, The University of Western Australia, working under the supervision of Dr Sandy Gordon and Assoc. Prof. Robert Eklund. We would like to invite you to participate in an intervention for coping in hockey. The primary purpose of this study is to explore the issues central to both coping in elite hockey and the coping needs of female hockey players in New Zealand. The second purpose is to provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) package to female hockey players and coaches. Specifically, we have completed the first purpose of the study and, from the information collated, have designed a Coping Mental Skills Training Programme (MSTP) package. We now need volunteers to participate in a 3-week intervention where you will learn mental skills that will enhance your coping skills in competitive hockey.

There is a lack of research on coping in the context of hockey. To help enhance the coping skills of elite female hockey players, it is important to explore the coping issues concerning competitive hockey. The information collected from the study has provided us with a comprehensive overview of the issues that are pertinent to coping in elite hockey as well as a description of effective coping strategies for dealing with competition stress in hockey. As a result of these findings, a Coping MSTP has been produced to cater for the needs of female hockey players in New Zealand.

Before we commence our intervention we will need to obtain your consent. A copy of both the consent form and information sheet are enclosed. After gaining your approval, you will participate in a six-week intervention. A summary report of the completed study will be distributed to you on request.

Enclosed is a copy of the information sheet informing you of the details of the study. Please read it carefully before deciding whether to accept the invitation to participate. If you are interested in participating, or have any questions, please do not hesitate to contact the researchers.

Thank you for taking the time to consider participating in this study.
Yours sincerely

Jaynie Gardyne, BPhEdH	Sandy Gordon, PhD	Robert C. Eklund, PhD
Principal Researcher	Researcher	Co-Researcher

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Appendix M
Information Sheet (Intervention)
Research Study Information Sheet

Participant

Female athletes involved in elite hockey are currently being invited to participate in a study being conducted by the Department of Human Movement and Exercise Science, The University of Western Australia. Please read this information sheet carefully before deciding whether to participate. If you decide to participate, we thank you. If you decide not to take part there will be no disadvantage to you, and we thank you for considering our request.

What is the aim of the study?

- To extend the literature on coping in elite hockey
- To explore the issues central to both coping in elite hockey and the coping needs of female hockey players in New Zealand.
- To provide valid practical recommendations and a Coping Mental Skills Training Programme (MSTP) to female hockey players and coaches.

Why is the study important?

There is a lack of research on coping in the context of hockey. To help enhance the coping skills of elite female hockey players it is important to explore the coping issues concerning competitive hockey. It is hoped that the information collected from the study will provide a comprehensive overview of the issues that are pertinent to coping in elite hockey, and provide a description of effective coping strategies for dealing with competition stress. Further recommendations and a Coping MSTP will be produced to cater for the needs of female hockey players in New Zealand.

What will participants be asked to do?

If you choose to participate in this study you will initially be asked to volunteer your time to participant in a six-week Coping MSTP intervention.

Appendix N
Coping Mental Skills Training Programme (MSTP)
Intervention

CONTENTS

Chapter One

THE TOUGH STUFF

Mental toughness

- "The ability to capitalise at key moments. It is about making good decisions and the appropriate actions at key moments. It is about having a 'f*#k-you' attitude - this is hurting, this is hard but you keep going and not drop out and give up." (Coach B)
- "The ability to guts it out. To not give in even though you want to." (Player B)
- "It is about adapting to different situations, so you have got to be flexible. For example, mental toughness is when you are out on the field and every time you touch the ball the umpire blows his whistle against you. You have got to have the mental toughness to not let it affect your game." (Player D)
- "Person never gives up, they go harder, make the extra nine yards. It is about doing the work, even when it is pouring with rain and you're tired, you just keep going – it is dedication." (Player E)
- "A mentally tough person to me is someone who can cope with whatever situations arise or whatever happens on and off the field, and not let it affect their performance to reach their goal, whether that's to win the match, to win the tournament or whatever. When the going gets tough that's when you have got to be able to do it." (Administrator B)
- "I think for me the people that are mentally tough are the people that can handle the high-pressure moments when you need to perform." (Player C)

The above quotes where provided by elite New Zealand hockey players, coaches and administrators.

IMPORTANCE OF THE MENTAL ASPECT OF HOCKEY PERFORMANCE

"In competitive hockey you have got to have a psychological advantage, not just for training and games but you have got to psychologically go out there and do it, especially when you're trailing or whatever. You have to be psychologically better than your opponent." (Player D)

COPING SKILLS PROGRAMME 'PHILOSOPHY

The goal of the intervention is to teach you practical coping skills to enable you to develop your mental abilities to the same level as your physical abilities. Indeed, such mental skills are a method used to improve oneself psychologically. It is a process, and not a 'quick fix', in which mental skills methods need to be learned, practised and modified like any other skill.

Competitions, by their nature, provide numerous opportunities for athletes to experience stress, due to the changing situations that occur in sport and the demands placed on those

who play. Some individuals are challenged by competitive situations whereas others are panicked or threatened. Such variations in responses can be a result of differences in knowledge, experience, skills, personality, or mental toughness. Coping strategies can be learnt much the same way as other sport skills, and can provide players with an effective way to manage potentially stressful situations, thus improving performance. Indeed, one of the major defining factors in determining a brilliant player from an average player in hockey, as in any sport, is one's ability to cope with pressure and with situations when things do not go to plan.

MENTAL QUALITIES FOR HOCKEY PERFORMANCE

- Focusing on the task – concentration
- Game awareness
- Self-confidence
- Preparation and readiness
- Mental toughness
- Ability to cope with pressure
- Know your game (self-awareness)
- Motivation and determination

How well do you display these qualities?

Performance = Skill (physical & mental) × Motivation

ATTITUDE MOMENTS

- Missing a tackle
- Losing control when dribbling
- Missing a shot at goal
- Giving a bad pass
- Letting a goal in
- Getting a poor umpiring decision
- Being substituted
- Others?

"What happens to you is rarely as important as how you react to what happens to you!"

Coping with Pressure

Dealing with pressure, stress and worrying

PRESSURE SITUATIONS

"Have I done enough, am I prepared? Can I play the way the team wants me to? Am I going to be able to do my job on the field? What if I get out there and it all goes to custard? What if I play rubbish? If I play rubbish will I get subbed off, and then what happens? Will that be my last game?" (Player B)

The above quote was taken from an interview with an elite hockey player in New Zealand. It provides an example of some of the concerns that players have, and the pressure that such thoughts create.

WHEN THE PRESSURE IS ON!

- View the situation as a challenge, not a threat
- Stress can be positive
- Worrying is a waste of energy
- Rationalisation – avoid panicking
- Be concerned as opposed to worried

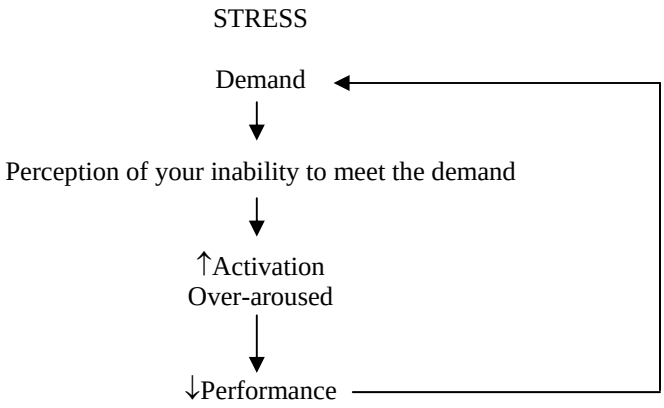
One of the major defining factors in determining a brilliant player from an average player in hockey, as in any sport, is one's ability to cope with pressure and with situations when things do not go to plan. The athlete who has the skills to actively do something to resolve or improve the situation is the athlete who will obviously be the most successful. We all know that hockey is a highly intense, fast-moving, and unpredictable game that demands a lot from those who play. In such situations there are always going to be elements of uncertainty and the potential for things to not always go to plan. Therefore, players need to learn how to deal with the pressures and demands of sport, and know how to deal with the elements of stress and worry that can occur.

It is the exciting, unpredictable, fast-moving, always-changing nature of sports such as hockey that attracts most players. Players like to challenge themselves and work hard to achieve but, for some people, such demands can cause excessive pressure, stress, and worry, which has adverse effects on their performance and motivation to play.

STRESS

Stress is experienced when a player perceives that their ability to cope is not able to meet the demands of the situation. Everybody experiences stress to varying degrees, and it can be interpreted as negative yet potentially positive. Though stress affects players differently, different situations can also have different effects on the same player.

It is important that hockey players are able to identify when they are experiencing stress, and to identify how they want to feel before and during games, to get the most out of their performance. It is beneficial for players to interpret stressful situations as a challenge and not a threat, and to use a variety of skills to control their levels of stress to enhance their performance.



"You have got to learn yourself what annoys you, what you are likely to do, so then you know about it and you can avoid it. You need to sit down and go 'OK' I get really annoyed when people aren't doing their jobs, so I need to find a way of calming myself and refocusing so it doesn't affect my performance, because if I start yelling negative comments it's not going to help'. But if you don't realise beforehand that you need to have a strategy, you can't develop it. (Player B)

EXERCISE — SOURCES OF STRESS

Make a list of the situations or circumstances that are sources of stress for you.

Strategies for Dealing with Stress

- Planning competitive routines
- Dealing with the 'what if' scenarios
- Game-focusing plans – controlling the controllables
- Communication – ensuring you are well informed of what is going to happen (take responsibility for knowing what is happening yourself).
- Set goals/objectives for the game and be familiar with your role within the team

Appraisals/Reappraisals

As stated previously, all players interpret information and react to it differently. One method to improve the way you react to a situation is to use appraisals/reappraisals, which create a positive, rather than a negative, way of thinking under pressure.

For most players, the initial appraisal of the situation is often threatening, which can be detrimental to performance. Therefore, a player's ability to cope is more successful if they are able to reappraise the situation to interpret it positively.

The consequence of a negative appraisal is that it often leads to irrational thoughts. Players are unable to focus on their tasks, and find themselves thinking irrationally. Such thoughts can lead to worry and self-doubts, which generate a self-fulfilling prophecy of failure.

The main objective of reappraisal is to challenge the irrational thoughts. Indeed, when players are able to appraise a situation as a challenge and enjoy the opportunities positively, they will feel more in control and become confident in overcoming the adversity.

"What happens to you is rarely as important as how you *react* to what happens to you!"

EXERCISE — Appraisal/Reappraisals
Please identify situation in which you could panic or appraise the situation as a threat, then reappraise it more positively. This technique also helps to rationalise the situation.

Appraisal	**Reappraisal**
"That player just made me look silly. I totally missed the tackle and they got a fast break on me. This player is going to walk all over me during the game."	"OK, I missed that tackle. That means I am going to have to mark this player tighter, give her no room to move, and get on top of her earlier."
"I'm so stupid; I should have anticipated that pass."	"What I did was stupid. It left the goal wide open for the opposition to score. This is good; I am aware that I am rushing in and need to be patient and hold off."
"I should have played better."	"It was disappointing and I would have preferred to have played better, but I did tackle well throughout the game."
"I never play well at that ground."	"I have been playing really well recently, so I am going to continue playing well and concentrate on my game."
"The last drag was off target; this drag is going to be off target too."	"Stick to my routine, focus on my techniques, breathe."
"Oh no, I have just got a green card. This means I am playing really badly. I will have to be careful not to get another one."	"OK, what does this mean? How does this affect me? It could be positive and mean that I am playing hard, or it could mean that I am not focused enough on what I am doing. I am not going to let this put me off my game. I will use my focus words and just keep playing hard."

Appraisal	Reappraisal

WORRY

At some stage, all people have concerns about various things for a variety of reasons. Indeed, it is wise to be concerned about certain factors potentially going wrong. This concern 'alerts' us to a potential problem and serves to motivate us to do something about solving and fixing it. However, sometimes an athlete's concern escalates out of control. For example, a player is excessively thinking about making mistakes during the game but, despite such a concern, she continues to do nothing to alleviate the negative thoughts or to solve the problem, while continuing to worry. For this player, concern has become **worry**.

In simple terms, worry is a collection of negative thoughts or images about concerns, usually related to future events. It incorporates both excessive thinking about problems or how to avoid them, and catastrophising about the possible consequences of such problems. For example, you excessively think about your problems, fear that they will lead to bad consequences, but do little about them.

Worrying leads to feelings or symptoms that are known as anxiety, such as tension, apprehension, upset stomach, sweaty hands, and an elevated heart rate. Such symptoms of anxiety are our natural warning response that alerts us to possible danger, and ensures we take action and deal with this danger. However, worrying usually produces maladaptive responses where, rather than taking action, people will spend time mulling the problem over and over in their minds. This makes them worry more and consequently experience more anxiety. Indeed, worrying is a vicious cycle that leads to more worrying, or worrying about the fact that you are worrying.

Common Factors that Players Worry about in Hockey

Through previous research conducted for this intervention, the following factors were identified as some of the common issues that hockey players worry about:

- Importance of the game
- What team mates would think or say
- Throwing a bad pass, missing the ball or missing a goal
- About abilities
- How good the opposition were
- Appearing to not perform up to potential

What you can do about it

- Minimise worrying through rethinking/rationalisation, problem solving and changing self-defeating behaviours
- Control physical symptoms through relaxation and breathing control
- Address the issue rather than ignore it; use proactive strategies to prevent it happening in the future rather than reliving further symptoms of anxiety
- Developing new skills to cope with problems when they arise

EXERCISE — CONCERNS CHECKLIST

This exercise is aimed at practising being *concerned* rather than worried. Write out an extensive list of any concerns you are experiencing, and then devise some strategies which will ensure that what you fear will happen doesn't. In addition, by doing something proactive, you will feel in control of the situation and feel better by alleviating the symptoms of excessive concern (e.g., upset stomach, frustration, feeling uncomfortable, avoidance, unable to concentrate on things).

Make a list of your concerns:

Proactive strategies:

EXERCISE — CLARIFY THE PROBLEM

With any problem, once you have identified it, it is also important to clarify it. Specifically, in this exercise you need to create a list of your symptoms and behavioural patterns. To aid you in clarifying the problem you need to answer the following general questions. It may be useful to think of a specific example you identified in the above exercise.

- Describe what you feel while you are worrying about something.
- What symptoms do you experience (e.g., muscular tension, increased heart rate, headaches)?
- Is your concentration affected? If so, how?
- Do you get restless or find it hard to settle into tasks?
- Is your sleep disrupted, or do you have trouble sleeping?
- Do you tend to panic or experience anxiety that is detrimental to your performance?
- Have you ever experienced severe symptoms where you have been unable to continue and needed to be removed from the situation?
- Do you avoid dealing with or doing certain things (e.g., procrastinate, delay making decisions, or neglect tasks)?

EXERCISE — IDENTIFYING YOUR WORRY PATTERNS

- What things do you typically worry about?
- What things do you typically avoid?

It may also be important to identify any lifestyle factors that could increase your anxiety (e.g., financial situations, relationships, risk taking behaviours etc.).

OVERCOMING WORRY

Realising that worrying is not beneficial

"Worrying takes just as much time as work and pays less."
(Author unknown)

There are no positive benefits gained from worrying. In fact, it only adds emotional pain and discomfort to you. Indeed, as identified earlier, worrying is unproductive and fails to help solve the problem or do anything to help alleviate the symptoms of anxiety. If something bad is going to happen then, no matter how much you worry about it, it will still happen. In addition, worrying affects the body and often people experience tension and suffer from headaches. It is also detrimental to enjoyment, as people stop enjoying the present moment because they are busy focusing on the fear of what may happen in the future.

Basically, it is important to keep things in perspective. Worrying is not only unnecessary but also bad for you!

Despite the fact that worrying is not beneficial, it is unlikely that telling yourself to 'stop worrying' will be able to prevent you from worrying. A good alternative is to be *concerned* rather than worried. Being concerned has less negative connotations as it is not interpreted as negative or bad, but rather a proactive approach. When you interpret something as a concern it means that you have identified that there is a problem and, as a result, undertake some form of action to fix it.

Analysing your thoughts

With anxiety, stress, worry and so on, it is important to undergo a complete self-analysis of your thoughts. To do so, follow the process below by answering these questions:

1. Identify the *Activating event* (A) – the trigger (event or circumstance) that sets the anxiety off. For example, what event, either external (something in the environment) or internal (something that happened inside you) were you reacting to?

2. Identify the *Consequence* (C) – your reaction, how you felt or behaved. For example, what did you feel (emotional response) or do (behavioural response)?

3. Identify your *Beliefs* (B) – what you told yourself about A which caused C. It is most important to identify your core beliefs. It may be useful to identify your evaluative beliefs and be aware of inferential distortions of reality.

4. Decide on a new *Effect* (E) – what outcome you want, or how you would prefer to feel or behave. Replace your old beliefs with a more appropriate rational belief.
5. *Dispute* (D) and replace any self-defeating beliefs. Does it help to believe this, and what logical evidence is there to support this belief?

6. Develop a plan of action – strategies – rethinking.

Plan of Action to Minimise Worry

- Acting on it
- Identify the real issue
- Decide if action is necessary
- Action – Solving the problem
- Let the worry go

Acting on it

You need to self-monitor your concern and whether you are excessively thinking about something while doing nothing about it (worrying).

What to look for:

- Predicting negative consequences
- Mulling over something but doing nothing
- Feeling uncomfortable about things
- Engaging in avoiding or maladaptive behaviours

It is important that you take responsibility for these concerns and do something to solve the problem, to prevent such worrying occurring in the future. Prevent negative consequences actually becoming reality by doing something about them.

Identifying the real issue

Identify what triggers your worries.

EXERCISE

Make a list of your concerns.

From the concerns list above, choose the one that you are most worried about. It may help if you think about which of those listed contributes most to your symptoms of anxiety or feelings of discomfort.

Make a list of your thoughts related to your concerns.

From those thoughts listed above, select the main thought that you mostly experience. For example, what do you say to yourself time and time again?

To help identify the real underlying issue, you need to keep progressing and asking questions such the following ones, to help chain your thoughts together.

What are you telling yourself?

What is it that really bothers you about that?

What is worrying about that? What are you predicting will happen?

If that were true, what does that mean to you?

Using the above questions as a guide, you are able to understand your underlying thoughts through a technique referred to as chaining. For example, a player is worrying about the importance of the game, but through chaining is able to identify that it is actually about how they feel about themselves and what is important to them.
E.g.,

Importance of game – debut → making a mistake → appearing incompetent → what would my team mates think → know can play better – not performing up to my potential → dropped from the team → disappoint my parents – criticise me → feel bad about myself… and so on.

EXERCISE

Use the chaining technique to help identify your underlying core beliefs.

Often concerns originate from irrational thoughts, such as making inferences about what will happen without evidence that it will probably happen. For this reason it is important to identify your evaluative thinking.

DISPUTE YOUR THOUGHTS

It is important to dispute your thoughts to help rationalise your beliefs. Indeed, in the above example it is unlikely that, as a result of giving one bad pass, you would be dropped from the team. If the player in the above example is able to compose herself and successfully give better passes for the rest of the game, little attention would be given to the mistake. It is important to understand that all players make mistakes; no one is perfect. So, if you make a mistake, reply by doing something good to make up for it rather than mulling over it and losing focus.

"The world is not going to end because you have mistrapped." (Coach A)

"First strategy has to be accepting that a mistake has been made and then looking at whether they can identify what they did wrong. Thirdly, we always look towards the next step. 'So next time I will do this, concentrate on that', and then they have to let it go. Giving players a strategy to deal with a mistake is one of the best things I can do I think. And giving them the confidence to know that the answer is within them. You know they can pull things out of their own head and figure it out for themselves." (Coach A)

HELPFUL TIPS

The following questions may be useful in the disputation process:

How does this thought affect me? Is it helpful to believe this thought?

What is the worst thing that could happen? Would this be so bad?

What would I prefer to happen?

Does it logically make sense that if X actually happened then Y would be the result? (e.g., If I gave a bad pass that would mean I would be dropped from the team?)

What is the likelihood that what you fear will happen?

Just because we prefer bad things not to happen, is it realistic to expect that they must never happen?

If your fears did happen, would it really be unbearable or simply unpleasant (outside your comfort zone)?

Would this eventuality really prove something about the kind of person you are? Can you evaluate your whole self-worth on a few behaviours or characteristics? What is a threat to your self-image?

"Those who spend their time worrying about what people think of them wouldn't worry if they knew how rarely other people think of them."

Decide Whether Action is Necessary

It is important to decide whether attention should be given to your concerns, either immediately or at a later time, or whether it is not important (have no control over). Indeed, if something is not important, it is important that you get rid of such worries, for example bin it (refer to thought-stopping section).

EXERCISE — ANALYSIS

	Things I can do something about	**Things I can't do anything about**
Important to me		
Not important to me		

Proactive Strategies – Problem Solve

It is important to take action and find a way of relieving and doing something positive about your concerns. Doing nothing won't help, so you need to take action.

Problem Solving

- Gather information – self-monitor thoughts
- Define and clarify the problem
- Identify the causes
- Consider all the possible strategies available to solve the problem
- Choose the most appropriate strategy
- Implement the strategies – actually do what you have decided on

It is also important that you consider whether you need help from someone, and who you are able to get help from. This may be a family member, friend, coach, other players, or a sport psychologist.

Strategies for 'Letting Go' of Worries

Interrupt the Worrying

Utilising thought-stopping techniques (refer to section on thought-stopping).

Rational Cards

EXERCISE

On a piece of card, write your worrying thought or belief. Then, directly under that, write a rational alternative or a new belief. Carry the card with you for 1 week reading it five times during the day.

Release your tension

Relaxation techniques are also a great way to relieve tension and help you feel better temporarily. Some techniques commonly used are the breathing focus technique, centring, and progressive muscle relaxation. Due to the limitations of this intervention relaxation, techniques will not be taught, but for further information in the future contact Jaynie Gardyne.

AROUSAL REGULATION

Self-awareness of arousal levels – psychological states

Arousal reduction techniques
- Progressive muscle relaxation – sensations of tension and relaxation
- Centring relaxation technique

Remember:

Breathe in nose → Breathe out mouth

Centre → Relax → Attention

Relaxation tips:

- Laugh or smile when you feel tension coming on
- Have fun – enjoy the situation
- Practise in stressful situations
- Slow down, take your time – DON'T PANIC
- Stay focused on the present
- Come prepared – Competition plan

Time Projection

To help deal with a range of circumstances or events, it is often useful to use a time projection technique to put the issue into perspective. Using some current concerns you have over certain circumstances or events, follow the process outlined below.

Imagine that the feared event occurred, then project your fears into the future. Firstly, go forward one day, then a week, then a month, then six months, then a year, and so on. At each point, consider how you are feeling at this time. Often you will realise that life still goes on, and as time goes on the issue usually becomes less prominent.

Distraction

Engaging in things to distract your mind can help relieve or prevent the onset of excessive worry. Things you can do are:

- Entertainment – watching movies or listening to music
- Mental activities – Doing puzzles
- Physical activities
- Relaxation

You have been provided with puzzle books, so please use them as a distraction technique at your discretion.

Talking

Women often like to talk their concerns over with others. Indeed, it can be useful to talk to someone else about your concerns. This technique also helps you to identify the problem and work through what is really bothering you. Writing things down in a notebook is a variation of this technique.

Combining techniques

Below is a short example to illustrate how a player can use a combination of techniques.

Mary, who had a tendency to worry about not playing up to her potential, found she was beginning to worry on Friday about her club final, which was not until Saturday. Indeed, Mary had no reason to feel worried as she was one of the most talented players in the competition and had previously represented her country at the sport. Despite her achievements and ability, Mary often felt pressured by the expectations of others on her. She felt that, because she was more experienced than the other players, the team expected more from her, which put pressure on her to perform. To help the situation Mary developed a range of techniques to utilise during the day, depending on what she was doing at that time. When Mary first realised that she was beginning to worry she wrote it down in a notebook and then used thought-blocking techniques to interrupt the worrying thoughts. When the thought reintroduced itself at various stages, she would use a variety of strategies to help. At university, she read a rational card she had created to remind her of her new belief and then was able to focus on her university work. While walking home from university she listened to music to distract her. While at home she then used breathing focus techniques to relieve her tension and then reminded herself of her new belief with her rational card again.

CONTROLLABILITY

EXERCISE — FACTORS YOU CAN AND CANNOT CONTROL

Please write in the appropriate box all the factors that you are able to control, as opposed to those factors that are outside your control.

Factors within my control	**Factors outside my control**

REMEMBER to focus on those factors that you can control, and forget about those that are outside of your control. Indeed, you cannot do anything about factors outside your control, so why waste valuable energy thinking about them. Focus on relevant cues.

KEEPING YOUR FOCUS

Concentration

From information gathered in interviews and questionnaires from top hockey players in New Zealand, concentration was one of the most prominent issues identified as being essential for optimal performance. Most of those interviewed indicated that 'concentrating' and 'focusing' was a very important mental quality of a hockey player, and was an area in which more of them wanted to improve.

Concentration is defined as a relaxed state of being alert. This means being able to attend to the things that matter and blocking out distractions. So, in essence, concentration is about focusing one's mental effort on the important sources of information. Naturally, concentrating is vital to performing optimally.

In a sport like hockey, during the course of the game players will experience changes in the intensity of play; correspondingly, they will also have a variation in the level of concentration required. For example, concentration may vary from intense moments of focusing, such as in the instant of a tackle or shot at goal, to having to try and maintain focus, such as playing on the left wing while the team is predominantly been playing up the right side of the field. Indeed, the latter of the two examples will also need to keep her mind on the action, despite not being directly involved, especially due to the fast, always changing nature of the game.

FOCUSING IN HOCKEY

- Ability to concentrate on the ball
- Focusing at the right time
- Focusing at the right time throughout the game
- Keeping your mind on the job, not thinking about other things

"In stressful situations keep it simple, concentrate on the ball, which is a really easy thing to do - so you go 'OK, I can do this." (Player C)

In order to attend to what is appropriate, a hockey player must be able to identify what is important for them to attend to, such as critical moments or critical cues.

Question?
What are the critical moments in hockey?

Which of the critical moments described are most relevant to your position?

What are the critical cues on which you should focus on during these moments, in order to perform optimally?

How good are you at focusing on cues and blocking out distractions?

It may be useful to create some cue words to help you focus during the critical moments listed above.

CRITICAL MOMENTS

What is the most critical (concentration) moment when dribbling, passing, tackling, and hitting?
For example:

- *Hitting:* 'position of the ball', 'body position', 'grip', 'accuracy – target', 'suitability of the hit selected'
- *Dribbling:* 'position of the ball', 'low body position', 'stick on the ball', 'ball control', 'vision'
- *Tackling:* 'the ball', 'feet position of opponent', 'stick position', 'patience'
- *Passing:* 'target – moving/stationary' 'follow through of stick – direction want to go', 'getting the ball away quickly', 'power - movement of feet'

Attentional Style and Shifts in Attention

In team sports such as hockey, the ability to switch attention is essential to produce an optimal performance. Being able to shift attention (also known as attentional flexibility) is the ability to alter both the width and direction of attention. The width of attention is the number of cues focused on at one time — that is, either a narrow or broad focus — whereas the direction is where the focus of one's attention is — either internally or externally.

For example, a broad-external focus would be when a player is scanning the field to quickly sum up the situation and choose the best option to take under the circumstances. Players whose position requires them to make tactical decisions and dictate the game, such as a centre-half, would usually have a strong broad-external focus. A narrow-external focus would be when a player is about to make a play or action, such as taking a free hit, where the player is focusing on hitting the ball. A broad-internal focus is required when the team discusses the game plan or certain tactics for the game. Lastly, a narrow-internal focus is when a player goes over the set penalty corners in her mind, or is attending to her own thoughts and feelings.

CONCENTRATION STYLES

- What styles of concentration are required for:
  - Dribbling?
  - Passing?
  - Tackling?
  - Hitting?
  - Captaincy?
- Does hockey demand more than one style?
  - Watching the ball
  - Focusing on a target (goal)
  - Analysing an opponent's weaknesses
  - Changing the defensive patterns of the team
  - Focusing on your timing in tackling
  - Others

Practical Skills for Improving Attention

Concentration, or the ability to focus, is a skill and, like all skills, can be improved through training. As previously stated, the first step is understanding the attentional demands of your position, and creating an ideal attention profile that you need for your various roles in the game. The next step is to analyse your strengths and weaknesses compared to the ideal attentional profile. Indeed, using video analysis to watch yourself play can be useful for analysing your ability to concentrate appropriately throughout the game.

Evaluate attentional abilities

FOCUSING ON YOUR CONCENTRATION

Self-assessment:
How good are you at focusing your concentration on what is happening **right now**?

- How good are you at focusing on the critical cues at the critical moments?
- When do you suffer from concentration lapses that affect your performance?
- Are there times when you struggle or find it hard to maintain your focus?

On a piece of paper, answer the above questions to help evaluate your attentional abilities.

Note: It is important not to infer that you necessarily have a concentration problem when you play poorly. Indeed, you need to be sure that a lapse in concentration or being distracted is the **cause** of your performance problems and not a **symptom** of some other problem.

Strategies for Improving Concentration

SIMPLE STEPS TO BETTER CONCENTRATION

- Use your breathing to help keep you relaxed and focused – 'deep breath and relax your body tension'
- Focus on the things that you can control
- Switch on and off - avoid the temptation to concentrate all the time
- Break the game into small 'parts', e.g., segments of each half
- Develop routines you follow in times when you are not intensely involved in play, e.g., when you are watching the movement of play but not close to the ball

ATTENTIONAL CUES

In simple terms, it is all about concentrating on the right things at the right times. Concentration cues are useful in focusing your attention on the task.

Three types of concentration cues:
- verbal or cue words (e.g., 'ready', 'focus')
- visual cues (e.g., using the circle line as a guide for aiming at the goal)
- physical cues (e.g., taking a deep breath, picking up the ball to place it for a free hit).

These cues can be used independently or in conjunction with each other.

Concentration cues are useful for helping athletes to shift their attention, especially taking time to switch off and then on again. They are also useful to help maintain your focus and prevent yourself from being distracted by either internal (e.g., dwelling on previous errors, annoyance at a referee's decision) or external (e.g., crowd or television cameras) factors.

PERFORMANCE ROUTINES

- Routines are like funnels that channel thoughts and actions before training or a game to where they need to be
- They set conditions that give you the best chance of reaching your ideal performance state, therefore leading to peak performance
- Think of your routines as checklists of things you do before you perform, like pilots who use a checklist before taking off for a safe journey each flight

SIMULATED PRACTICES

Simulated practices that provide athletes with real-life distractions during practice games and so on provide an excellent concentration strategy.

Simulated Practice Situations

- Crowd noise training
- Trash talking or sledging training
- Bad umpiring decisions training (e.g., the coach has the umpire intentionally favour the other team or consistently give bad calls)
- Bad luck training or training under unfair conditions (e.g., starting 1-nil down in a practice match or practising under unfavourable conditions).

BAD UMPIRING DECISIONS TRAINING

Umpires are an integral part of sports. Indeed, without them, there would be no game. As identified earlier, umpires are one factor outside of your control, and whether you agree with their decisions or not you must accept them and continue playing your game. It is important that players learn to control their reactions to umpires, and settle back into their game and stay focused on their job.

It is useful to remember to focus on '**controlling the controllables**' rather than getting distracted by irrelevant factors over which you have no control or influence.

Chapter Two

THINKING CONFIDENCE, BEING CONFIDENT
Self-talk and thought stopping

SELF-TALK

Self-talk is conscious thinking or inner statements; it is what we intentionally say to 'ourselves'. It influences your feelings and in turn your behaviour. Self-talk mainly influences your attention-concentration, stress and self-confidence.

ATHLETES USE SELF-TALK:

- … in practice and competitions
- … for skill learning, to focus on critical elements of the skill, e.g., "Smooth follow-through", "Rhythm and target"
- … for attention control – focusing, e.g., "Watch the ball"
- … to increase motivation and control effort, e.g., "Go for it"
- … to build self-confidence, e.g., "You have done it before; you can do it again"
- … to create a mood, e.g., "Easy", "Loose"

SAYING: '**Confident players think they can, and they do!**'

SELF-TALK CAN BE…

- Task-specific (focus on the technique of the task)
- Positive self-talk (encouragement, effort etc.)
- Mood words or sensations (refer to the nature of the performance)

EXERCISE — POSITIVE VERSUS NEGATIVE SELF-TALK

The first step in gaining control of self-talk is to become aware of what you say to yourself. Using a self-talk log, develop a list of any negative self-talk you think you do. Replace the negative self-talk with **positive self-talk**. Every time you think a negative thought, replace it with the positive statement you have created.

SELF-TALK LOG

Negative self-talk	**Positive self-talk**
For example, "I don't want to screw up. I really don't want to have to have a shot at goal."	"Keep your eye on the ball, think 'smooth' and just hit the ball sweetly."

CUE WORDS – Cue words work as triggers to quickly remind us to: help us believe in ourselves, focus our attention, or enhance our mood. They are usually only one or two words to help us concentrate on positive thoughts or actions. Please create some cue words to utilise while playing hockey. Use the following table to help you create these cue words.

Statements	**Purpose**	**Implementation**
Focus statements		
Positive self-statements		
Sensations		

EXERCISE — POSITIVE AFFIRMATIONS

Make a commitment to believing in yourself, your goals, and your ability. One way to help you achieve this is to write some positive affirmations. Write some positive affirmations highlighting your strengths and ability.

POSITIVE BELIEFS

"I have a good hand-eye coordination".
"I believe I can do it."
"I am determined and committed to reaching my goals."
"I have practised hard."

For example:
"I have invested a lot of time and energy into improving my performance"
Such as
Improving the mental aspect of your sport
For example:

- "I have a variety of goal scoring shots and am deadly accurate, which makes me dangerous and allusive on attack."
- "I have worked really hard towards achieving my goal and I have the ability and potential to achieve them."

Please write some positive affirmations for the following reasons:

FOCUS WORDS
For example:

- "Smooth follow-through"
- "Hard and low"

SELF ENCOURAGEMENT
For example:

- "You are doing great."
- "You have the ability."

EFFORT CONTROL
For example:

- "Go for it - this is my goal/objective."
- "I have put the time into this – make it happen."
- "Push yourself – pick up the intensity."

"Harder, faster, stronger!"(Player C)

POSITIVE THINKING
THREE KEY POINTS (POSITIVE FOCUS)
'Think Positive'
SMILE
Goals

THOUGHT STOPPING

Although thought stopping may only provide a temporary relieve from negative thinking, it is useful in breaking repetitive patterns.

EXERCISE — THOUGHT STOPPING

Any time you have a negative thought, follow the procedure outlined below:

- Hold the thought in mind and shout "Stop!" (or do it quietly in your mind). Alternative words are 'Bin it', 'Park it" etc.
- Repeat this procedure whenever you have a negative thought.
- Visual aids – some athletes may prefer to visualise something to help aid this process, for example, seeing a set of traffic lights with a red light, or seeing a stop sign. For the "Bin it" example, you can imagine writing the negative thought on a piece of paper and then screwing it up and discarding it in the bin!
- Physical aids – some athletes may prefer a physical action to help, such as slapping one's leg.

SELF-CONFIDENCE

FACTORS IN DETERMINING SELF CONFIDENCE

- Belief in one's ability
- Self-fulfilling prophecy – if you think you can or can't you're probably right
- Self-talk
- Performance accomplishments
- Acting and thinking confidently
- Preparation

"Self-belief. Knowing 'OK, we have won this game, let's wrap it up, let's finish it off'." (Player A)

Self-confidence is vital in order to perform successfully. Naturally, in order to succeed you must believe in your ability to do so. Therefore self-confidence can be defined as "a player's belief in her ability to execute the various skills required for playing the game." (Hodge & McKenzie, 2002). Specifically, self-confidence is based on the expectation of success. In other words, if you expect to succeed then you are confident.

It is well known that confidence has an effect on anxiety, concentration, decision-making, and motivation.

Benefits of self-confidence

Confident hockey players are those players most likely to cope in pressure situations. Specifically, they are able to remain calm and focused because they believe in their ability to succeed. These players play to their full potential; they take risks, and rarely make unforced errors or hesitate.

In addition, confident players or teams play attacking hockey; they adopt positive tactics that incorporate calculated risk taking. Whereas players or teams that lack confidence often play "not to lose"; they play defensively or conservatively. In addition, they are extremely tentative, as they are afraid to make mistakes and, as a consequence, avoid taking risks, and will wait for things to happen rather than taking control of the game. Indeed, a lack of confidence is a precedent for self-doubts, anxiety, excessive nervousness, trouble concentrating, and poor decision-making.

A belief in one's ability is thought of as a self-fulfilling prophecy, where if you think can or can't then you are probably right. Indeed, confident players think they can and they do! In fact, it is almost the expectation that something will happen that helps cause it to happen, provided we have the necessary skills and want to do it.

Strategies for Enhancing Self-Confidence

Performance Accomplishments

Whether you have previously performed successfully or not will have major ramifications for your self-confidence. Performance accomplishments provide a powerful source of information about a player's capability to do the job required, or perform to their potential. To illustrate the influence of performance accomplishments, think about a player who drags out on attacking penalty corners. If the player accurately drags the ball out most of the time, they will feel confident that they are able to do it repeatedly in subsequent penalty corners. However, if they have been off target on their drag-outs, then their confidence for performing this skill is not probably going to be very high.

To help enhance your success you need to participate in activities that allow you to experience success. An effective way to do this, which helps build confidence, is to set and attain goals (refer to the section on goal setting). Indeed, success leads to confidence and, as a result, to further success.

Vicarious Experiences (Modelling)

Another way of increasing confidence can be through watching someone else who is similar to you performing successfully. If you are able to realise that people with a similar ability level to you are able to perform favourably, then you are able gain some measure of confidence that you will also be able to perform. Imagery works in a similar way to modelling, because it allows you to imagine yourself performing favourably, such as successfully executing a skill.

Using role models is also a good way of increasing confidence. For example, thinking about how confident people act and approach certain situations is a good way of dealing with things. In addition, learning from others is a good way of boosting your confidence. Indeed, soon we realise that other people have similar feelings to ourselves, and we can learn from how they approach certain situations.

> "I think the younger players can learn a lot from the senior players by just talking to them, asking them questions, if they are not too scared to do that. And talking
> about experiences they have had or how they felt about certain things."
> (Player C)

Acting and Thinking Confidently

By simply acting and thinking confidently you are able to increase your confidence, even if you may not feel particularly confident. By acting confidently, not only do you epitomise confidence to your opponents but also, the more confidently you act, the more likely you are to feel and perform confidently. A positive spin-off about acting confidently is that

confidence is contagious. By exemplifying confidence, you will help raise your team mates' spirits in times of adversity.

"To be an achiever you have to be a believer"

"In our culture we are not arrogant. We undervalue ourselves and have a second-rate mentality. We need to have that self-belief. One time we had breakfast with the Australians and the girls realised that they were just the same as us; they ate the same breakfast. Indeed, we have the potential to be just as good if we believe it."
(Coach B)

Self -talk

Negative comments and thoughts can be detrimental to self-confidence. In basic terms, your thoughts translate into actions, so it is essential that you maintain a positive attitude. One way to ensure you keep positive is to encourage yourself to use positive self-talk and affirmations. This is particularly necessary when mistakes are made. Once a mistake has been made there is no point dwelling on it; you need to refocus and get back into the game. Cue words can be useful for this and if you are having negative thoughts relating to the mistake, positive self-talk and affirmations are useful to give you renewed confidence.

Preparation

One of the easiest ways to ensure you feel confident is to simply be prepared. Indeed, when you have done everything possible to ensure success, you feel more confident. For example, going into a game knowing what position you are playing, being very clear about your role or job within the team, having set team and individual goals/objectives for the game, having well-rehearsed set plays (e.g., penalty corner options, defensive screens, free hits etc.) and being well organised (e.g., time management, equipment checks) will make you feel confident that you are in control. Pre-game routines and performance routines, and performance coping plans, help take the worry out of competitions by being fully prepared for the game.

Another essential aspect of preparation is pre-season training. Indeed, the importance of being in great physical condition will also increase confidence. Not only are you less likely to be injured but, when you have done the fitness work, you are able to play at optimum intensity, therefore fulfilling your potential. You are able to fully focus on your performance, rather than focusing on your lack of fitness.

"Confidence and being consistent – to be able to reproduce that performance whether you are on your own turf playing a club game, or playing a rep. game at a provincial level, or playing for New Zealand. I don't see them as being any different. You just have to duplicate that performance." (Coach A)

EXERCISE — REASONS TO FEEL CONFIDENT

Please provide three reasons for each of the following questions:

1. **Why do you TRUST yourself as a hockey player?**

2. **Why do you BELIEVE in your hockey ability?**

3. **Why do you CARE about your hockey performance?**

CONFIDENCE

- Having the ability yourself
- From the knowledge that preparatory work has been well done
- Good training

PROBLEMS
Over-confidence – refuse to alter training methods
Self-doubt – negative attitude

IMPROVEMENTS

It is good to identify areas where you need to improve, but do it in a positive manner. Improve so that you progress as a hockey player and perform to your potential! Avoid FRUSTRATION, ANGER, AND DISAPPOINTMENT! It is natural to feel disappointed, because we strive very hard to achieve our goals and our performance is important to us! Therefore, it is important to **channel** such feeling to help improve your performance – always take the **POSITIVES** with the negatives.

Naturally, defeat is hard to accept, but you must think through your performance calmly and rationally. Think it through and note the comments from significant others and coaches

carefully, identifying the areas you need to improve. Indeed, others' opinions are important and you can gain valuable insight from them.
When significant others are giving you constructive feedback, remember to ask them about the parts of the game where you did particularly **well** and to acknowledge the positive aspects of your performance. For example, prompt them to say something positive e.g., "Well, that was good!" Also **reward** yourself when you have a **good** game!

FACTORS TO FOCUS ON!
That is, those factors that you can control! Make a list of those factors that you need to improve and then set goals to do so!

"Becoming more confident in yourself"
"Improving your technique"
"Achieving your goals"

"I've now learnt to focus on the things to improve and avoid worrying about team selection." (Player E)

FOCUS ON YOURSELF!

"Concentrate on how you perform."
"Define success by achieving your goals for the game."

When you have to be the best/perfect, and compare yourself to others, it puts unnecessary pressure on you and makes you get hung up on things that are irrelevant, instead of focusing on what your goals are! Forget about others e.g., other competitors, selectors, spectators (remember to place less importance on spectators – not significant). You are playing for yourself! Sometimes we have a false perception of what other people think but, at the end of the day, does it matter what other people think?

Chapter Three

FUNDAMENTAL SKILLS

Performance = Skill (physical & mental) × Motivation

"Take Control of Your Hockey Development"

COMPETITION PLANNING and MENTAL PREPARATION

"The will to win is important, but the will to prepare to win is essential."

MENTAL PREPARATION

Mental preparation is a key aspect of a successful sporting performance and is an effective method of achieving your Ideal Performance State. Specifically, mental preparation provides a consistent and systematic plan to help you organise and structure your thoughts, actions, and behaviour on the day of game.

"How well you perform is often decided before you play."

PREPARATION AND PERFORMANCE

Successful New Zealand hockey players have standard rituals and routines that they use in preparing for an event or competition. The following is a specific example:

- Know the opposition's strengths and weaknesses – plan what I have to do e.g., goalkeeper: "If we are playing Australia I'll sit there and I'll think 'Right, OK, who are their top front five forwards and where are they likely to shoot?"

PHASES OF AN EFFECTIVE PRE-PERFORMANCE ROUTINE

- Preparation
  - Use of "rituals"
- Execution
  - "Watch the ball hard and let yourself react"
- Focus
  - "What do I have to do right now to perform well?"
  - Use of "triggers" – verbal, physical, and visual, e.g., "Watch the ball"
  - Visualisation
- Evaluation

DEVELOPING A PRE-PERFORMANCE ROUTINE

- Players need to identify the routines that they currently use. Does it contain the phases explained above?
- Players need to rehearse each phase, visualising their actions/thoughts during each phase.
- Players need to perform their routines in drills and skills practice.
- Transfer the use of these routines into simulated practices (e.g., practice games or club games).
- Evaluate and refine.

Indeed, you need to develop the preparation that best suits you.

What kind of preparation do you prefer – how much, when, and why?

What is my routine for competition day – how, when, and what do I do to ready myself for playing?

Do I have a defined competition strategy going into each game (e.g., goals or objectives, know my role)?

EXERCISE — PREPARATION PLANS

To help you develop routines and game preparation, please complete the following plans.

Pre-game Plan

General warm-up (Approx. 60 mins before the game)	
Physical	Mental

Start preparation (Approx. 5-10 mins before the game)	
Physical	Mental

EXAMPLE - **COMPETITION WARM-UP** (45 mins)

Preparation Plan

Think about what you want to achieve – goals & objectives.

Be familiar with your competition plan and warm-up routine.

Imagery – visualise your game as you want to perform it (POSITIVE). For example, go over your game plan, role within the team and performance technique.

'General Warm-Up'

(Approximately 45 – 60 minutes before the competition)

45 mins - Get dressed and prepare gear. Team talk – verbal communication. Game plan - strategies

30 mins- Go for a run to warm up your muscles.
- Stretch major muscle groups. Imagery - visualise the game mentally.

15 mins - Ballistic stretches Think about personal goal(s).
- Drills
- Sprints/Shuttles

Monitor arousal levels – be aware of feelings

How do you feel?

OK

NOT OK, tense

FOCUS ON THE POSITIVE

Centring/Breathing – Focus on Myself, not what others are doing

'Pre-start' preparation

(Approximately 10 – 15 minutes before the competition)

10 mins - Hitting and trapping
- Elimination drills

GOING OK → OK

NOT OK → - Go back to some basic skills just to get confidence.

. Verbal communication

5 mins- Final team talk. Positive self-statements - confidence

BREATHE and RELAX
Positive affirmations

GAME

DO NOT RUSH – take a moment before you go onto the field to COLLECT yourself!

COMPETITION WARM-UP (Short version)

Think about what you want to achieve – goals & objectives

Be familiar with your competition plan and warm-up routine

Imagery – visualise your game as you want to perform it (POSITIVE)

5 mins Imagery – set moves/specific plays

Monitor arousal levels – be aware of your own feelings

How does she feel?

OK → FOCUS ON THE POSITIVE

NOT OK, tense → Centring/PMR

5 min Go over game plan (tactics) and think about your role for the game (e.g., job position)

GOING OK → OK

NOT OK →
- Centring/PMR
- Remember your cue words – to help you concentrate and focus on the game
- Take some time out – go to a quiet place

5 min - GOALS – review goals Positive self-statements
Imagery - Confidence

BREATHE and RELAX

TAKE YOUR TIME – take a moment before you run onto the field to COLLECT yourself!

GAME FOCUS PLAN

Write out the plan of tactics, strategies, thoughts, cues, self-talk, imagery, and centring activities that you intend to use during the game.

First 5 minutes of the first half:

Last 5 minutes of the first half:

First 5 minutes of second half:

Last 5 minutes of the second half:

General play:

Focus points for critical moments, such as before set plays or actions (e.g., free hit, penalty corners etc.):

COPING PLAN

"A mentally tough person to me is someone who can cope with whatever situations arise or whatever happens on and off the field, and not let it affect their performance to reach their goal, whether that's to win the match, to win the tournament, or whatever. When the going gets tough that's when you have got to be able to deliver." (Administrator B)

Please write a plan of how you intend to cope with problems or distractions that occur before or during your performance. The best way to develop a coping plan is to identify all the possible things that could go wrong, and then develop solutions to help you deal with such problems or distractions.

Being over-psyched (i.e., over-activated):

Not psyched-up enough:

Pre-performance distraction (e.g., feeling anxious, other things happening around you):

Change in start time (earlier or later):

Non-ideal facilities:

Early mistake in game:

Loss of ideal focus:

Repeated mistakes or errors:

Poor performance (e.g., first game of the tournament/series or previous competition):

Poor overall performance (need to cope and refocus for the next competition):

EXAMPLE — A player's personal coping plan

Being over-psyched (i.e., over-activated):
- Positive self-talk e.g., "**I can do this easily**."
- Breathe – Centring or PMR - Relaxation
- Focus on the goals or objectives that I have set for this competition
- Slow down – stop rushing
- Ignore others – focus on my performance – right approach
- Prevention – takes the worry out of competing – I am prepared with a coping plan and organised

Not psyched-up enough:
- Imagining the game – what it feels like – VIVID imagery
- Watching the games before mine
- Music – Pump you up
- Wake myself up e.g., splash cold water on my face
- Focus on my performance goals

Pre-performance distraction (e.g., feeling anxious, other things happening around you):
- Remove myself from the distraction if I can e.g., "Find a quieter place to chill out or warm up in"
- Concentrate on the game plan and my goals for the game
- Keep busy e.g., focus on myself and keep my mind on the job
- Talk to myself (self-talk) – especially if tense – bring my attention back to the job at hand
- Use my **cue words** to help focus my attention (especially when I feel myself being distracted)
- Need to be aware of my concentration and where I am focusing my attention so can SHIFT attention → cue word (e.g., cue word for technique)
- Cue word **"Go"** (Concentrate & Focus), **"Smooth"** (Smooth follow through when hitting)
- Take my time (prevent myself from rushing) – if needed, take some time out and then get back into the game.
- Positive imagery

Change in start time (earlier or later):
- RELAX
- Slow down
- Warm-up routines for earlier or later start time
- Always be prepared to play at an earlier time

Non-ideal facilities:
- Not within my CONTROL – cannot control the facilities etc. – forget about it!
- Rational thinking – Same for everyone
- Make the best out of a bad situation – You should be able to handle the situation better than most competitors as you have a coping plan already in place

Early mistake error in the game:

- Mistake → SLOW DOWN – BREATHE → Avoid panicking
- If going badly a mistake will cycle and lead on to another one if not controlled – therefore view the mistake as a LEARNING CURVE and move on – **Make the best out of a bad situation** – Optimism
- Distraction management – cue word "LET GO"
- Positive self-talk – remove any self-doubts ("Bin it") and avoid negative thoughts – use positive affirmations
- Calm down and collect my thoughts – think about my goals
- MAKE SURE you take your time – RELAX!
- Rationalisation – remember this is only one mistake and there is plenty of time to correct things or get my performance back on track (Fix the problem – may need adjustment in technique) – avoid panicking!

Loss of ideal focus:

- For example, loss of focus due to a bad hit - Cue word – "**Smooth**" – Tell myself to concentrate and focus on striking the ball sweetly – get my attention back on the job
- Focus on the movement that I am performing – utilise cue/trigger words
- Think about my performance goals/objectives for the game

Repeated mistakes or errors:

- Take the **"best out of a bad situation"** approach – nothing I can do about previous mistakes so I need to move on and **salvage** what I can from the situation
- **Forget it** – focus on GOALS
- If I STUFF UP – do not panic – **Relax** and '**JUST DO IT**'
- FOCUS ON THE POSITIVE
- Warm-up for a longer period of time or take some time out between games
- Focus on performing the basics.
- Seek advice from someone I trust on how I can correct my performance
- Use positive imagery and relaxation techniques

Poor performance (e.g., first game of the day or previous competition):

- POSITIVE self-statements
- Concentrate on my set objectives and game rather than distractions
- Evaluate performances – bring closure to any poor performances – Write down the positive and negative from my performance - look at **things to improve** and take some **positives** from the situation – then **BIN IT** – forget about it – get over it – do not let it enter my head again.
- Thought stopping
- Positive imagery

Poor overall performance (need to cope and refocus for the next competition):

- Bring **closure to previous poor performances** (refer above to poor performances)
- It is important to **pinpoint areas to work on** to help prevent future problems – video analysis may be useful, and always listen to the **comments** of people you trust. Sometimes I may not want to hear or read any comments or criticism. Indeed, I may not even adjust my technique due to such comments, but it is important to take an open view on things and get what help I can out of what is usually constructive criticism. Remember: the people are not putting me down; they are trying to help me improve my performance. Do not take anything **personally** – they are talking about my **performance,** not attacking me personally.
- No "I CANT'S"
- Focus on my performance goals and what I am trying to achieve in my sport
- Play for FUN!
- Remember it is a new day and a new competition, so avoid bringing previous baggage to the next competition

EXERCISE — 'WHAT IF' SCENARIOS

One way of ensuring that you are prepared is to prepare for the inevitable. One way to do this is to identify the possible situations that could go wrong, and develop strategies for dealing with them when they do.

Brainstorm – create a list of possible scenarios, no matter how absurd they are.

For every possible scenario you have identified, create some strategies for overcoming and dealing with these situations.

COMPETITIONS

Competition is a mixture of success and defeat!

GAME DAY PLAN AND REVIEW

- Schedule - checklist
- Warm-up plan
- Performance goals
- Key words/'triggers'

GAME REVIEW

- Technique/skills
- Mental Review
  - Readiness
  - Concentration
  - Confidence
  - Control of emotions
  - Game plan
- Training goals

ORGANISATIONAL SKILLS

Ensure that:

- You have a game plan and defined goals for each game – confidence
- Check all gear is packed and ready to go – double check
- Preparation is good – done all the work (training etc.)
- Warm-up planned
- Coping strategies in place – able to deal with situations if anything goes wrong

Things to remember:

- PREPARATION IS THE KEY – always allow enough time – that is the key to a relatively stress-free experience
- Be familiar with the game schedule
- Allow for some quiet time – may want something to take your mind off things or do in a relaxed manner e.g., listening to music, reading a book or doing puzzles
- Allow time for eating regularly, and drink plenty of fluids throughout the day – you will need the energy to perform optimally
- Allow time to familiarise yourself with the surroundings, e.g., know where the toilets are!
- Remember that all playing fields have their quirks e.g., distracting or unusual circumstances
- Have spare equipment as you may need last-minute alterations
- Focus on your GOALS
- Remember all the work you have done to prepare for this event
- RELAX and ENJOY yourself!

QUESTIONS FOR DEALING WITH POOR PERFORMANCES

Questioning yourself – it is necessary to find the causes of poor results. It is also important to question good results to identify your strengths!

- Was your concentration and focus appropriate throughout the game?
- Were the tactics and game plan applied effectively?
- Were you given the opportunity to do your best?
- Was the preparation properly planned before the game?
- Did you lack experience and/or was there a fault in your technique?
- Were you fit enough to sustain your effort throughout the game?
- Were the demands too great?
- Do you need more experience at this level of competition?
- Should you train more in "**game situations**"?
- Did you just "freak out" because of nerves?
- Did you use pre-competition and coping plans?
- Do you need some coaching advice?
- Did you use positive self-statements and affirmations?
- Did you use your focus words?
- Is the amount and type of training satisfactory?

THE IMPORTANCE OF COMMUNICATION

Effective communication was identified strongly throughout interviews, by players, coaches, and administrators, as one of the critical elements in the success of any team. Indeed, a lack of good communication is the most common barrier to achieving team goals and objectives. Key concepts of good communication are the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others. In addition, communication in teams involves more than simply listening and talking. It is about being a cooperative and trusted team member, where you are reliable, valued, and respected.

COMMUNICATION

- Paraphrasing
- Clearly providing examples to help clarify what you mean
- Being sensitive to the feelings of others
- Body language
- Communication is a two-way process

COMMUNICATION INFLUENCES THE EFFECTIVENESS OF….

- Players' motivation
- Team dynamics
- Players' concentration
- Players' confidence
- Team goals and objectives
- Expectations of coaches, management, and players
- Skill acquisition
- Team tactics and strategies
- Players' attitudes, feelings and behaviours

IT IS IMPORTANT TO REMEMBER…

Communication is a two-way process where both coaches and players have a responsibility to make it work!

"When a couple of younger players didn't perform in the first couple of days you could see them lose their confidence, I'd like to think that the senior players are approachable enough. I think the younger players need to feel comfortable to talk to us about that sort of thing." (Player A)

Team environments are very similar to those of families, so it is no surprise that situations such as tension, frustration, and conflict occur. Indeed, many communication problems are a result of misunderstandings between members of the team. It is important to avoid assumptions, as communication is based on individuals' perceptions. For example, you might think you say something as it was intended, but it is actually perceived by someone else as

something completely different. Good interpersonal communication helps avoid such situations.

IMPROVING INTERPERSONAL COMMUNICATION

- Make sure everyone is going in the same direction e.g., all members of the team are working towards achieving the same goals.
- Discuss strategies for enhancing team unity (e.g., ensuring all members are valued, their individual contribution is appreciated, and that they feel accepted and supported).
- Learn how to give and receive feedback and criticism constructively. It is important to remember that such criticism is in reference to your performance, and not you personally. Try to be logical and less emotional.
- Listen to others and they will listen to you! Each member of the team can be a valuable resource to learn from, especially in terms of coping (e.g., learn from each other. Finding out how others have coped in the past with similar situations is a valuable way of actively finding solutions to your own issues).
- Learn to tolerate team members' differences. After all, that is what being part of a team is about. Each team member approaches things in their own way, so respect each other's differences.
- Avoid cliques, backstabbing and gossiping. such behaviours will destroy team unity. It is important to be honest and to address issues directly as they arise. If someone is annoying you or causing you stress, let them know, and come to some way of resolving it. More than likely they may not even realise that they are making things difficult for you.
- Keep confrontations or conflict within the team. Deal with the person or issue directly (e.g., "When you yell at me, it unsettles me and actually distracts me, rather than helping improve my performance.").

DEALING WITH SITUATIONS

- *Describe* the situation as you see it. Provide a clear message of what you perceive the situation to be, e.g., "What I see happening is…" "I feel like you are always criticising the way I perform; it makes me feel as though I am not good enough to do my job."
- *Express* your feelings on the situation. "When you yell at me, it makes me feel like a loser." For example, "I can remember playing for Team A and getting abused by Player A, and I felt like a real loser. But it sort of just made you think 'oh god, how embarrassing. I hope the others don't think like that'." (Player D)
- *Specify* what changes you would like to see happen to improve the situation, e.g., "I would prefer it if you gave me constructive comments rather than being demanding or abusing me."
- Provide *Consequences*. "If you don't speak to me with respect, I will be put off my game and hence will not do my job properly, which will put extra stress on you. In addition, it won't help us achieve our goals."

EFFECTIVE COMMUNICATION

Helping the message get through as intended:

- Paraphrasing – saying back in your own words what has just been said
- Questioning – gaining more information on the issue
- Clarifying – letting others know what has been heard
- Encouraging – be attentive and supportive
- Reflecting – identifying feelings
- Understanding – put yourself in the other person's shoes and understand it from their point of view
- Summarising – bringing it all together and summarise the main points
- Promote alternative perspectives

"Communication is a two-way thing. We have to make the effort when someone makes a mistake to say 'don't feel bad or worry, it's all right, next time. Forget that one; let's move on.' I think it is for them also to understand that the only way they are going to improve is to make mistakes. There is no way I expect people coming in to immediately be up to international standards, because they have never played it. We have to set realistic expectations for them and be approachable and say 'hey, look, it doesn't matter; let's talk it through. What were you thinking? OK, because I thought you were going to make a tackle and you didn't. What was going on?' But they also have to go 'OK, this is a step up and I am here because I am good, and I have to take some responsibility and make the effort to go up and talk to the people involved, for example, and say, look, I really don't quite understand.' So it's definitely a two-way thing." (Player B)

EXAMPLE — Feedback

Previous interviews from younger elite hockey players identified that these players felt they did not receive as much feedback as they would like. This statement illustrates the importance of communication. How much feedback do you need? How much are you getting? Often younger players or those coming through the levels do not ask coaches for enough feedback. It is important for younger players to have the confidence to take responsibility and ask for feedback when it is needed. Indeed, often coaches will not give feedback because they assume that the players already know. Therefore, avoid frustration and misunderstandings by asking.

For example, a common stressor identified is being substituted. It is important to ask the coach if the reason you were substituted was to give you a rest or because you did not do what they had asked you to do. This is an important issue, as it will influence your performance: a) you may not identify an issue that you need to improve; or b) you may assume you were unfairly subbed off, leading to frustration, when the coach actually thought you were having a great game and wanted to rest you; or c) it affects your confidence because you wrongly perceive that the coach subbed you because you were playing poorly. Avoid assumptions and misunderstanding; take responsibility and ask why you were substituted.

Listen to Understand
Speak to be Understood

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Appendix O
WORKSHEET 1

EXERCISE — SOURCES OF STRESS

Make a list of the situations or circumstances that are sources of stress for you.

WORKSHEET 2

EXERCISE — Appraisal/Reappraisals

Please identify situations in which you could panic or appraise the situation as a threat, then reappraise it more positively. This technique also helps to rationalise the situation.

Appraisal	**Reappraisal**

WORKSHEET 3

EXERCISE — CONCERNS CHECKLIST

This exercise is aimed at practising being *concerned* rather than worried. Write out an extensive list of any concerns you are experiencing, and then devise some strategies which will ensure that what you fear will happen doesn't. In addition, by doing something proactive, you will feel in control of the situation and feel better, by alleviating the symptoms of excessive concern (e.g., upset stomach, frustration, feeling uncomfortable, avoidance, unable to concentrate on things).

Make a list of your concerns:

Proactive strategies:

WORKSHEET 4

EXERCISE — CLARIFY THE PROBLEM

With any problem, once you have identified it, it is also important to clarify it. Specifically, in this exercise, you need to create a list of your symptoms and behavioural patterns. To aid you in clarifying the problems you need to answer the following general questions. It may be useful to think of a specific example you identified in the above exercise.

- Describe what you feel while you are worrying about something.
- What symptoms do you experience (e.g., muscular tension, increased heart rate, headaches)?
- Is your concentration affected? If so, how?
- Do you get restless, or find it hard to settle into tasks?
- Is your sleep disrupted, or do you have trouble sleeping?
- Do you tend to panic or experience anxiety that is detrimental to your performance?
- Have you ever experienced severe symptoms where you have been unable to continue and needed to be removed from the situation?
- Do you avoid dealing with or doing certain things (e.g., procrastinate, delay making decisions, or neglect tasks)?

WORKSHEET 5

EXERCISE —IDENTIFYING YOUR WORRY PATTERNS

- What things do you typically worry about?
- What things do you typically avoid?

It may also be important to identify any lifestyle factors that could increase your anxiety (e.g., financial situations, relationships, risk-taking behaviours and so on).

WORKSHEET 6

Identifying the real issue

Identify what triggers your worries.

EXERCISE

Make a list of your concerns.

From the concerns listed above choose the one that you are most worried about. It may help if you think about which of those listed contributes most to your symptoms of anxiety or feelings of discomfort.

Make a list of your thoughts related to your main concern.

From those listed above, select the main thought that you mostly experience. For example, what do you say to yourself time and time again?

Specifically, to help identify the real underlying issue, you need to keep progressing and asking questions such the following to help chain your thoughts together.

What are you telling yourself?

What is it that really bothers you about that?

WORKSHOP 6

What is worrying about that? What are you predicting will happen?

If that were true, what does that mean to you?

Using the above questions as a guide, you are able to understand your underlying thoughts through a technique referred to as chaining. For example, a player is worrying about the importance of the game, but through chaining is able to identify that it is actually about how they feel about themselves and what is important to them.
E.g.,

Importance of game – debut → making a mistake → appearing incompetent → what would my team mates think → know I can play better – not performing up to my potential → dropped from the team → disappoint my parents – criticise me → feel bad about myself… and so on.

EXERCISE

Use the chaining technique to help you identify your underlying core beliefs.

WORKSHEET 7

Decide whether action is necessary

It is important to decide whether attention should be given to your concerns, either immediately or at a later time, or whether it is not important (have no control over). Indeed, if something is not important, it is important that you get rid of such worries, for example by "binning it" (refer to thought-stopping section).

EXERCISE — ANALYSIS

	Things I can do something about	**Things I can't do anything about**
Important to me		
Not important to me		

WORKSHEET 8

Rational Cards

EXERCISE

On a piece of card, write down your worrying thought or belief. Then, directly under that, write a rational alternative or a new belief. Carry the card with you for 1 week, reading it five times during the day.

Distraction

Engaging in things to distract your mind can help relieve or prevent the onset of excessive worry. Things you can do are:

- Entertainment – watching movies or listening to music
- Mental activities – Doing puzzles
- Physical activities
- Relaxation

You have been provided with puzzle books. Please use these as a distraction technique at your discretion.

WORKSHEET 9

CONTROLLABILITY

EXERCISE — FACTORS YOU CAN AND CANNOT CONTROL

Please write in the appropriate box all the factors that you are able to control, as opposed to those factors that are outside your control.

Factors within my control	**Factors outside my control**

REMEMBER to focus on those factors that you can control and forget about those that are outside of your control. Indeed, you cannot do anything about factors outside your control, so why waste valuable energy thinking about such factors? Focus on relevant cues.

WORKSHEET 10

Question
What are the critical moments in hockey?

Which of the critical moments described are most relevant to your position?

What are the critical cues on which you should focus during these moments, in order to perform optimally?

How good are you at focusing on cues and blocking out distractions?

It may be useful to create some cue words to help you focus during the critical moments listed above.

WORKSHEET 11
CONCENTRATION STYLES

- What styles of concentration are required for:
  - Dribbling?
  - Passing?
  - Tackling?
  - Hitting?
  - Captaincy?
- Does hockey demand more than one style?
  - Watching the ball
  - Focusing on a target (goal)
  - Analysing an opponent, weakness
  - Changing the defensive patterns of the team
  - Focusing on your timing in tackling
  - Others

WORKSHEET 12

FOCUSING ON YOUR CONCENTRATION

Self-assessment:

How good are you at focusing your concentration on what is happening **right now**?

- How good are you at focusing on the critical cues at the critical moments?
- When do you suffer from concentration lapses that affect your performance?
- Are there times when you struggle or find it hard to maintain your focus?

On a piece of paper, answer the above questions to help evaluate your attentional abilities.

WORKSHEET 13

EXERCISE — POSITIVE VERSUS NEGATIVE SELF-TALK

The first step in gaining control of self-talk is to become aware of what you say to yourself. Using a self-talk log, develop a list of any negative self-talk you think you use. Replace the negative self-talk with **positive self-talk**. Every time you think a negative thought, replace it with the positive statement you have created.

SELF-TALK LOG

Negative self-talk	**Positive self-talk**
For example, "I don't want to screw up. I really don't want to have to have a shot at goal."	"Keep your eye on the ball, think 'smooth' and just hit the ball sweetly."

WORKSHEET 14

CUE WORDS – Cue words work as triggers to quickly remind us to: help us believe in ourselves, focus our attention, or enhance our mood. They are usually only one or two words to help us concentrate on positive thoughts or actions. Please create some cue words to use while playing hockey. Use the following table to help you create these cue words.

Statements	**Purpose**	**Implementation**
Focus statements		
Positive self-statements		
Sensations		

WORKSHEET 15

EXERCISE — POSITIVE AFFIRMATIONS

Make a commitment to believing in yourself, your goals, and your ability. One way to help you achieve this is to write some positive affirmations. Write some affirmations, highlighting your strengths and ability.

Please write some positive affirmations for the following reasons:

FOCUS WORDS

For example:

- "Smooth follow-through."
- "Hard and low."

SELF-ENCOURAGEMENT

For example:

- "You are doing great."
- "You have the ability."

EFFORT CONTROL

For example:

- "Go for it - this is my goal/objective."
- "I have put the time into this – make it happen."
- "Push yourself – pick up the intensity."

WORKSHEET 16

EXERCISE — REASONS TO FEEL CONFIDENT

Please provide three reasons for each of the following questions:

4. Why do you **TRUST** yourself as a hockey player?

5. Why do you **BELIEVE** in your hockey ability?

6. Why do you **CARE** about your hockey performance?

WORKSHEET 17

You need to develop the preparation that best suits you.

What kind of preparation do I prefer – how much, when, and why?

What is my routine for competition day – how, when, and what do I do to ready myself for playing?

Do I have a defined competition strategy going into each game (e.g., goals or objectives, know my role)?

WORKSHEET 18

EXERCISE — PREPARATION PLANS

To help you develop routines and game preparation, please complete the following plans.

Pre-game Plan

General warm-up (Approx. 60 min before the game)	
Physical	**Mental**
Start preparation (Approx. 5-10 min before the game)	
Physical	**Mental**

WORKSHEET 19
GAME FOCUS PLAN

Write out your plan of tactics, strategies, thoughts, cues, self-talk, imagery, and centring activities that you intend to use during the game.

First 5 minutes of the first half:

Last 5 minutes of the first half:

First 5 minutes of second half:

First 5 minutes of the second half:

General play:

Focus points for critical moments, such as before set plays or actions (e.g., free hit, penalty corners etc.):

WORKSHEET 20

COPING PLAN

Please write a plan of how you intend to cope with problems or distractions that occur before or during your performance. The best way to develop a coping plan is to identify all the possible things that could go wrong, then to develop solutions to help you deal with such problems or distractions.

Being over-psyched (i.e., over-activated):

Not psyched-up enough:

Pre-performance distraction (e.g., feeling anxious, other things happening around you):

Change in start time (earlier or later):

Non-ideal facilities:

WORKSHEET 20

Early mistake in game:

Loss of ideal focus:

Repeated mistakes or errors:

Poor performance (e.g., first game of the tournament/series or previous competition):

Poor overall performance (need to cope and refocus for the next competition):

WORKSHEET 21

EXERCISE – 'WHAT IF' SCENARIOS

One way of ensuring you are prepared is to prepare for the inevitable. One way to do this is to identify possible situations that could go wrong, and to develop strategies for dealing with them if they do.

Brainstorm – create a list of possible scenarios, no matter how absurd they are.

For every possible scenario you have identified, create some strategies for overcoming and dealing with these situations.

TARGET DATES

21 July –	Intervention – fill in pre-intervention evaluation forms and start intervention.
11 August –	Send back completed worksheets 1 – 12.
1 September -	Send back completed worksheets 13 – 23, that is, the completion of the intervention. Fill in post-intervention evaluation forms and workbook feedback sheets.
End of season -	Fill in follow-up intervention evaluation forms.

The above are target dates to help keep you on track. Naturally, you are busy people, so if you are having trouble meeting these deadlines, make sure you do not hesitate to contact the researcher and we will discuss some other options.

Thanks
Jaynie Gardyne
Principal Researcher

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Work (03) 218 2599 Ext. 858
Email: jaynie.gardyne@sit.ac.nz

Please do not hesitate to contact me any time!

Appendix Q
Coping Skills Performance Profile
PRE - INTERVENTION

COACH'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

MENTAL QUALITY: **Mental Toughness**

MEANING: Mental toughness refers to the ability to perform successfully within pressure situations and cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to individual game plan and plays to strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game and perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
PRE - INTERVENTION

SIGNIFICANT OTHER'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

MENTAL QUALITY: **Mental Toughness**

MEANING: Mental toughness refers to the ability to perform successfully in pressure situations and cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to individual game plan and plays to strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all									Very much	

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game and perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all									Very much	

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

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Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
PRE - INTERVENTION

PLAYER'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance, and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

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ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to individual game plan and plays to strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all									Very much	

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game, and perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all									Very much	

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance, i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
POST - INTERVENTION

COACH'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

MENTAL QUALITY: **Mental Toughness**

MEANING: Mental toughness refers to the ability to perform successfully in pressure situations and to cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to individual game plan and plays to strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all									Very much	

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game and perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all									Very much	

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance, i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
POST - INTERVENTION

SIGNIFICANT OTHER'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance, and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

MENTAL QUALITY: **Mental Toughness**

MEANING: Mental toughness refers to the ability to perform successfully in pressure situations, and to cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to individual game plan and plays to strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game, and to perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance, i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
POST - INTERVENTION

PLAYER'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance, and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

MENTAL QUALITY: **Mental Toughness**

MEANING: Mental toughness refers to the ability to perform successfully in pressure situations, and to cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to their individual game plan and plays to their strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game, and to perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance, i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
FOLLOW-UP — INTERVENTION

COACH'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance, and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

MENTAL QUALITY: **Mental Toughness**

MEANING: Mental toughness refers to the ability to perform successfully in pressure situations, and to cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to individual game plan and plays to strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game, and to perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance, i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
FOLLOW-UP — INTERVENTION

SIGNIFICANT OTHER'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance, and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

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MEANING: Mental toughness refers to the ability to perform successfully in pressure situations, and to cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to individual game plan and plays to strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game, and to perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance, i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile
FOLLOW-UP — INTERVENTION

PLAYER'S NAME: _____

ID NUMBER (Office use only): _____

INSTRUCTIONS:

Reflect on [Player's Name] _____ current mental hockey performance, and rate their performance on a scale of 0 – 10 (circle your response) for the following mental qualities:

- Mental toughness
- Coping with stress
- Focusing on task – concentration
- Confidence
- Positive communication
- Preparation and readiness

When evaluating their performance, consider how strongly you believe they display the given actions and behaviours associated with each mental quality listed.

Coping Skills Performance Profile

MENTAL QUALITY: **Mental Toughness**

MEANING: Mental toughness refers to the ability to perform successfully in pressure situations, and to cope with difficult periods during the game.

ACTIONS/BEHAVIOURS:

- Positive body language under pressure
- Performs what is required under pressure
- Composed – calm and in control
- Adheres to their individual game plan and plays to their strengths when under pressure
- Adheres to the team game plan when under pressure

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Coping with Stress**

MEANING: Coping with stress refers to the ability to feel calm and composed before one's game, being confident one will perform well, and coping with pre-performance stressors.

ACTIONS/BEHAVIOURS:

- At ease, looking calm and relaxed
- Positive comments in relation to game
- Appearing confident
- No obvious signs of worrying or apprehension
- Able to cope effectively when something interrupts their pre-performance routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Focusing on task – Concentration**

MEANING: The ability to focus on the appropriate cues/tasks at hand throughout the game.

ACTIONS/BEHAVIOURS:

- Positive body language – appearing to be alert
- Use of constructive talk on the field – content reflects the performance process
- Use of physical or verbal triggers (e.g., cue words)
- Appropriate physical reaction to a situation
- Awareness – selecting the appropriate cues

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Confidence**

MEANING: Confidence refers to a self-belief in one's ability to meet the demands of the game, and to perform successfully under pressure.

ACTIONS/BEHAVIOURS:

- Positive body language – looking strong and able rather than hesitant
- Communicating and encouraging on the field
- Performing well and not making unforced errors
- Taking calculated risks
- Playing to win

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Coping Skills Performance Profile

MENTAL QUALITY: **Positive Communication**

MEANING: Positive communication refers to the ability to express one's thoughts, feelings, and needs effectively and, reciprocally, to be able to understand those of others.

ACTION/BEHAVIOURS:

- Listens to others and shows understanding
- Positively expresses feelings or opinions
- Ask questions when unsure of anything
- Is encouraging and supportive of others
- Provides constructive criticism
- Uses positive self-talk and positive affirmations

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

MENTAL QUALITY: **Preparation and Readiness**

MEANING: Preparation and readiness refers to the ability to prepare for training and competition, and to control the factors that influence performance, i.e., rest, diet/nutrition, equipment checklists, mental rehearsal, physical preparation.

ACTIONS/BEHAVIOURS:

- Not rushed and in control before the game
- Punctual
- Personal equipment is organised
- Appropriate physical warm-up prior to participating
- Demonstrates a consistent pre-competition routine

RATING:

0	1	2	3	4	5	6	7	8	9	10
Not at all										Very much

Appendix R
Coping Skills Performance Profile
PRE - INTERVENTION EVALUATION

PARTICIPANT NAME: _____
ID NUMBER (Office use only): _____
DATE: _____

INSTRUCTIONS:
Rate your **knowledge** of each of the following coping skill areas (*Please circle*).
KNOWLEDGE:

1. Mental toughness

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

2. Coping with pressure

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

3. Concentration skills

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

4. Confidence

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

5. Competition planning

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

6. Communication

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

7. Self-talk and thought stopping

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

Coping Skills Performance Profile

INSTRUCTIONS:

Rate the **importance** of each of the following coping skill areas (*Please circle*).

IMPORTANCE:

8. Mental toughness

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

9. Coping with pressure

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

10. Concentration skills

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

11. Confidence

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

12. Competition planning

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

13. Communication

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

14. Self-talk and thought stopping

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

Coping Skills Performance Profile

INSTRUCTIONS:

Rate how often you **use** each of the following coping skill areas (*Please circle*).

IMPORTANCE:

15. Mental toughness

0	1	2	3	4	5	6	7	8	9	10
Never										Always

16. Coping with pressure

0	1	2	3	4	5	6	7	8	9	10
Never										Always

17. Concentration skills

0	1	2	3	4	5	6	7	8	9	10
Never										Always

18. Confidence

0	1	2	3	4	5	6	7	8	9	10
Never										Always

19. Competition planning

0	1	2	3	4	5	6	7	8	9	10
Never										Always

20. Communication

0	1	2	3	4	5	6	7	8	9	10
Never										Always

21. Self-talk and thought stopping

0	1	2	3	4	5	6	7	8	9	10
Never										Always

POST - INTERVENTION EVALUATION

PARTICIPANT NAME: _____
ID NUMBER (Office use only): _____
DATE: _____

INSTRUCTIONS:
Rate your **knowledge** of each of the following coping skill areas (*Please circle*).
KNOWLEDGE:

1. Mental toughness

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

2. Coping with pressure

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

3. Concentration skills

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

4. Confidence

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

5. Competition planning

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

6. Communication

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

7. Self-talk and thought stopping

0	1	2	3	4	5	6	7	8	9	10
Very low										Very high

Coping Skills Performance Profile

INSTRUCTIONS:

Rate the **importance** of each of the following coping skill areas (*Please circle*).

IMPORTANCE:

8. Mental toughness

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

9. Coping with pressure

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

10. Concentration skills

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

11. Confidence

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

12. Competition planning

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

13. Communication

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

14. Self-talk and thought stopping

0 1 2 3 4 5 6 7 8 9 10
Not at all important Extremely important

Coping Skills Performance Profile

INSTRUCTIONS:

Rate how often you **use** each of the following coping skill areas (*Please circle*).

IMPORTANCE:

15. Mental toughness

0	1	2	3	4	5	6	7	8	9	10
Never										Always

16. Coping with pressure

0	1	2	3	4	5	6	7	8	9	10
Never										Always

17. Concentration skills

0	1	2	3	4	5	6	7	8	9	10
Never										Always

18. Confidence

0	1	2	3	4	5	6	7	8	9	10
Never										Always

Competition planning

0	1	2	3	4	5	6	7	8	9	10
Never										Always

19. Communication

0	1	2	3	4	5	6	7	8	9	10
Never										Always

20. Self-talk and thought stopping

0	1	2	3	4	5	6	7	8	9	10
Never										Always

FOLLOW-UP — INTERVENTION EVALUATION

PARTICIPANT NAME: _____
ID NUMBER (Office use only): _____

DATE: _____

INSTRUCTIONS:
Rate your **knowledge** of each of the following coping skill areas (*Please circle*).
KNOWLEDGE:

1. Mental toughness

0 1 2 3 4 5 6 7 8 9 10
Very low Very high

2. Coping with pressure

0 1 2 3 4 5 6 7 8 9 10
Very low Very high

3. Concentration skills

0 1 2 3 4 5 6 7 8 9 10
Very low Very high

4. Confidence

0 1 2 3 4 5 6 7 8 9 10
Very low Very high

5. Competition planning

0 1 2 3 4 5 6 7 8 9 10
Very low Very high

6. Communication

0 1 2 3 4 5 6 7 8 9 10
Very low Very high

7. Self-talk and thought stopping

0 1 2 3 4 5 6 7 8 9 10
Very low Very high

Appendix S
SOCIAL VALIDATION QUESTIONNAIRE

PARTICIPANT'S NAME:

DATE:

ACCEPTABILITY OF PROCEDURES

Please rate the following coping skills you learnt, in terms of how **enjoyable** you found them:

1. Mental toughness

0 1 2 3 4 5 6 7 8 9 10
Not enjoyable Very enjoyable

2. Coping with pressure

0 1 2 3 4 5 6 7 8 9 10
Not enjoyable Very enjoyable

3. Concentration skills

0 1 2 3 4 5 6 7 8 9 10
Not enjoyable Very enjoyable

4. Confidence

0 1 2 3 4 5 6 7 8 9 10
Not enjoyable Very enjoyable

5. Competition planning

0 1 2 3 4 5 6 7 8 9 10
Not enjoyable Very enjoyable

6. Communication

0 1 2 3 4 5 6 7 8 9 10
Not enjoyable Very enjoyable

7. Self-talk and thought stopping

0 1 2 3 4 5 6 7 8 9 10
Not enjoyable Very enjoyable

Please answer the following questions:

8. How much did the **learning** of the coping skills disrupt your normal daily life?

0	1	2	3	4	5	6	7	8	9	10
Not much at all										Very much

9. How much did **practising** the coping skills disrupt your normal daily life?

0	1	2	3	4	5	6	7	8	9	10
Not much at all										Very much

10. How **worthwhile** do you think a coping skills programme would be for other elite hockey players?

0	1	2	3	4	5	6	7	8	9	10
Not at all beneficial										Very beneficial

SATISFACTION WITH THE RESULTS

Please rate the following coping skills you learnt, in terms of how **satisfied** you are with your performance and level of improvement.

11. Mental toughness

0 1 2 3 4 5 6 7 8 9 10
Not satisfied Very satisfied

12. Coping with pressure

0 1 2 3 4 5 6 7 8 9 10
Not satisfied Very satisfied

13. Concentration skills

0 1 2 3 4 5 6 7 8 9 10
Not satisfied Very satisfied

14. Confidence

0 1 2 3 4 5 6 7 8 9 10
Not satisfied Very satisfied

15. Competition planning

0 1 2 3 4 5 6 7 8 9 10
Not satisfied Very satisfied

16. Communication

0 1 2 3 4 5 6 7 8 9 10
Not satisfied Very satisfied

17. Self-talk and thought stopping

0 1 2 3 4 5 6 7 8 9 10
Not satisfied Very satisfied

Please answer the following questions:

18. Please rank (1 = most beneficial; 7 = least beneficial) your preferences for the following coping skills in terms of how **beneficial** they are to your competitive hockey performance. If not applicable, please state N/A.

Mental toughness ____

Coping with pressure ____

Concentration skills ____

Confidence ____

Competition planning ____

Communication ____

Self-talk and thought stopping ____

19. Do you consider the changes in your **hockey performance** as a result of participating in the coping skills programme to be significant?

0	1	2	3	4	5	6	7	8	9	10
Not significant										Very significant

20. If, from your perceptions, the coping skills programme has contributed to a change in your hockey performance, can you state why this is so, and identify specifically which coping skills or components of the workbook (activities, information, etc) have contributed to this change?

Please answer the following questions:

21. To what extent do you feel you have increased or decreased your effectiveness at coping over the duration of the coping skills programme?

0	1	2	3	4	5	6	7	8	9	10
Much less effective					No change			Much more effective		

22. Overall, I would rate my coping skills as:

0	1	2	3	4	5	6	7	8	9	10
Not very skilled									Excellent skills	

23. Describe **two** skills you have improved as a player over the duration of this coping skills programme?